

Pulmonary Diseases Howard University Hospital

Overview and Rationale

Pulmonary medicine is the diagnosis and management of disorders of the lungs, upper airways, thoracic cavity, and chest wall. The pulmonary specialist has expertise in neoplastic, inflammatory, and infectious disorders of the lung parenchyma, pleura, and airways; pulmonary vascular disease and its effect on the cardiovascular system; and detection and prevention of occupational and environmental causes of lung disease. Other specialized areas include respiratory failure and sleep-disordered breathing.

The general internist should be able to evaluate and manage cough, dyspnea, fever with infiltrates, mass or nodule on the chest radiograph, pleurisy, and pleural effusion. He or she should also be able to diagnose and manage patients with common respiratory infections; initiate the diagnostic evaluation of respiratory neoplasm; and manage the initial approach to patients with respiratory failure, including those in intensive care units.

The internist will usually be assisted by the pulmonary specialist for diagnostic procedures and complicated conditions such as advanced respiratory failure. If such expertise is not available, the internist, with additional training, may have to assume these roles.

Goals:

- 1) To acquire the knowledge, skills and attitude to effectively assess and manage the patient with pulmonary diseases.

Objectives: At the end of the rotation, the resident should be able to'

- 1) evaluate and manage common respiratory complaints
- 2) discuss the pathology and pathophysiology of pulmonary diseases
- 3) interpret common pulmonary procedures and test
- 4) perform clear and concise pulmonary consultation

Rotation Description and Lines of Responsibility

The pulmonary rotation is a four rotation offered at Howard university Hospital comprising both an outpatient and inpatient consultative experiential educational experience. The attending physician is responsible for all clinical, educational and administrative activities during this rotation; Residents will also interact with fellows who are undergoing training in the subspecialty of Pulmonary Diseases. The fellow supervises the clinical activity of the residents and reports to the attending physician.

The resident will initially independently assess and evaluate inpatient consultations from the clinical services at HUH. The resident is responsible for collecting and collating all laboratory and radiological data and the subsequent completion of the consult data base. Cases are presented to the attending physicians during daily bedside teaching rounds Teaching rounds are patient-base discussions which are evidence-based and involves all

aspects of the care of the patient including clinical, diagnostic, and therapeutic aspects of care.

Residents will also attend the outpatient pulmonary clinics. These include the general pulmonary clinic and the specialty clinics, such as, the sarcoid clinic. Resident will assess and follow new and established patients in the clinic under the direct supervision and mentorship of the attending physician assigned to the clinic. The resident will be exposed to the outpatient management of common pulmonary disorders and to appreciate the natural history of these disorders.

Residents will also participate in the preparation and performance of a number of pulmonary procedures such as, pulmonary function testing, bronchoscopy, Gram stain interpretation of the sputum and thoracentesis.

Teaching Methods:

Core Lectures: Residents are required to attend core lectures in pulmonary diseases throughout the academic year. These lectures are usually given at the pathophysiology and Grand Rounds conferences.

Teaching Rounds: Teaching rounds are conducted on a daily basis at the bedside where faculty discuss and demonstrate clinical, diagnostic and therapeutic aspects of the cases presented by the resident.

Didactics: Didactic sessions are facilitated by the attending physician throughout the rotation. Topics include the following;

- Adult respiratory distress syndrome
- Airways disease
 - Asthma
 - Bronchiectasis
 - Bronchitis
 - Chronic obstructive pulmonary disease
 - Upper airway obstruction
 - Aspiration pneumonia
- Congenital lung disease
 - Alpha1-antitrypsin deficiency
 - Cystic fibrosis
 - Dysmotile cilia syndrome
- Infection (see also Infectious Disease)
 - Atypical mycobacteria
 - Empyema
 - Lung abscess
 - Pneumonia
 - Community-acquired

- Hospital-acquired
 - In immunosuppressed patient
 - Pulmonary mycoses
 - Tuberculosis
- Interstitial disease
 - Collagen vascular disease
 - Drug-induced
 - Eosinophilic pneumonia
 - Hypersensitivity
 - Idiopathic pulmonary fibrosis
 - Sarcoidosis
- Neoplasia (see also Oncology)
 - Confirmed lung cancer
 - Mediastinal
 - Solitary nodule
- Occupational disease
 - Asbestos-related
 - Occupational asthma
 - Pneumoconiosis
- Pleuritis/pleural disease
 - Neoplastic
 - Non-neoplastic
 - Pleural effusion
 - Pneumothorax
- Prevention
 - Avoidance of respiratory irritants, allergens
 - Immunization
 - Pulmonary carcinogens (radon, passive smoking)
 - Smoking cessation
- Pulmonary disease in pregnancy (see also Medical Consultation)
- Sleep-disordered breathing
- Vascular lung disease
 - Pulmonary hypertension
 - Cor pulmonale
 - Thromboembolism
 - Vasculitis (Wegener's, pulmonary/renal syndromes)

Journal Club: Residents participate in journal club once per month.

Procedure Skills (*see also* Critical Care Medicine)

- Arterial blood gas sampling
- Endotracheal intubation
- Monitoring of oxygen saturation
- Skin test for allergy, tuberculosis

- Spirometry and peak flow assessment
- Pulmonary artery catheterization
- Thoracentesis
- Pleural biopsy (optional)

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Primary Interpretation of Tests

- Complete pulmonary function tests (spirometry; measurement of lung volumes, diffusing capacity, flow volume loop)
- Pulmonary artery catheter readings

Ordering and Understanding Tests

- Bronchoscopy, including lavage and biopsy
- Cardiopulmonary exercise test
- Computed tomography of thorax
- Cytology, pathology of lung and pleural biopsy specimens
- Diagnostic studies for venous thrombosis
- Mediastinoscopy, mediastinotomy
- Pleural fluid analysis
- Pulmonary angiography
- Sleep study
- Ventilation/perfusion lung scans

Evaluation Methods:

Residents are evaluated by faculty in a summative fashion at the end of the rotation using a global rating form.

Faculty are evaluated by residents in an anonymous fashion and submitted to the program director's office.

The rotation is evaluated by the residents using a global rating form. Forms are submitted to the program director's office.

Reading List