

GOALS AND OBJECTIVES FOR PULMONARY MEDICINE

Pulmonary Medicine

Overview:

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.

Clinical Training and Education in Pulmonary Medicine

Residents in internal medicine, under the supervision of pulmonary fellows and faculty specialists, participate in the care of both outpatients and inpatients with Pulmonary disease. Residents train as consultants in Pulmonary medicine. Residents participate in the Pulmonary service's didactic and clinical conferences and one month is devoted each year to core didactic instruction in Pulmonary diseases including the interpretation of chest radiography.

Common Clinical Presentations:

- Chest pain
- Cough
- Dyspnea
- Excessive daytime sleepiness
- Febrile patient with infiltrate
- Hemoptysis
- Nodule or mass on chest radiograph
- Pleural effusion, pleurisy
- Stridor, hoarseness
- Wheezing

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

ORGAN AND SYSTEM COMPETENCIES IN INTERNAL MEDICINE

Clinical Training and Education in Pulmonary Medicine (Cont'd):

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

Clinical Conditions:

Adult respiratory distress syndrome

Airways disease

- Asthma
- Bronchitis
- Chronic obstructive pulmonary disease
- Upper airway obstruction
- Bronchiectasis

Aspiration pneumonia

Congenital lung disease

- Cystic fibrosis
- Alpha - antitrypsin deficiency
- Dysmotile cilia syndrome

ORGAN AND SYSTEM COMPETENCIES IN INTERNAL MEDICINE

Clinical Training and Education in Pulmonary Medicine (Cont'd):

Infection

Pneumonia

- Community-acquired
- Hospital-acquired
- In the immunosuppressed patient

Atypical mycobacteria

- Empyema
- Lung abscess
- Pulmonary mycoses
- Tuberculosis

Interstitial disease

- Drug-induced
- Hypersensitivity
- Idiopathic pulmonary fibrosis
- Sarcoidosis
- Collagen vascular disease
- Eosinophilic pneumonia

Neoplasia

- Confirmed lung cancer
- Solitary nodule
- Mediastinal

Occupational disease

- Asbestos-related
- Occupational asthma
- Pneumoconiosis

Pleuritis/pleural disease

- Pleural effusion
- Pneumothorax
- Neoplastic
- Non-neoplastic

Prevention

- Avoidance of respiratory irritants, allergens
- Immunization
- Smoking cessation
- Pulmonary carcinogens (radon, passive smoking)
- Pleural biopsy (optional)

ORGAN AND SYSTEM COMPETENCIES IN INTERNAL MEDICINE

Clinical Training and Education in Pulmonary Medicine (Cont'd):

Pulmonary disease in pregnancy

Sleep-disordered breathing

Vascular lung disease

Pulmonary hypertension

-Cor pulmonale

-Primary

Thromboembolism

Vasculitis (Wegener's, pulmonary/renal syndromes)