

## **Curriculum on Pulmonary Elective Danbury Hospital Internal Medicine Residency Program**

Faculty Representative: Dave Oelberg MD  
Faculty Editor: Dino Messina MD PhD  
Resident Representative: A. Lungulescu MD, J. Periyapperuma MD  
Revision Date: March 2008

### **A. Educational Purpose and Goals**

The medical resident is fostered to develop a bedside physiological systematic approach to the evaluation and management of patients with a wide array of pulmonary problems. The rotation includes inpatient and outpatient pulmonary consultations, pulmonary function testing, chest radiograph and chest CT interpretation, cardiopulmonary exercise studies, sleep medicine cases and several teaching conferences. The resident may also participate in our pulmonary rehabilitation program. Finally, the medical resident will have the opportunity to review lung biopsies with the attending pulmonologist and pathologist.

### **STRUCTURE OF ROTATION:**

There is no in-house or weekend call for this rotation. The standard weekly schedule is as follows:

8:00 – 9:15 AM:	Morning Report (except Wednesday) Medical Grand Rounds (Wednesday)
9:15 AM – 12:00 PM:	Attending Rounds
12:00 – 1:30 PM:	Noon Conference Lung Tumor Board (2 <sup>nd</sup> , 4 <sup>th</sup> Tuesdays) Sleep Case Conference (2 <sup>nd</sup> , 4 <sup>th</sup> Wednesdays)
1:30 – 5:00 PM:	Pulmonary Consult Service PFT / Exercise / Sleep Study Review

### **B. Teaching Methods**

The faculty consists of six board certified pulmonologists; Dr. Thomas Botta, Dr. John Chronakos, Dr. Eric Jimenez, Dr. Douglas Kahn, Dr. Jose Mendez, and Dr. David Oelberg; four of which are also board-certified in sleep medicine (Drs. Chronakos, Kahn, Mendez, and Oelberg). Another faculty member is Dr. Andrew Tucker Ph.D., who is a clinical psychologist and is board-certified in sleep medicine.

#### ***1. Supervised Direct In-Patient Care:***

For a given week, a faculty member of the Pulmonary Section is assigned to the inpatient pulmonary consult service. Residents will function as supervised consultants for these patients. Typically, 1<sup>st</sup> year residents are assigned to this service.

New and established pulmonary consult patients will be seen and examined by the residents, who will formulate a hypothesis and a treatment plan and present the case to the attending. Teaching will be integrated with patient case discussions. Both the resident and the attending will examine the patient and discuss the patient's care and the resident's assessment.

### ***2. Supervised Direct Out-Patient Care:***

For a given week, there are typically two to three faculty members of the Pulmonary Section who are assigned to the pulmonary office. Second and third year residents are typically assigned to this service, and analogous to the in-patient service, residents function as supervised consultants.

### ***3. Pulmonary Function Testing, Exercise Laboratory, and Sleep Disorders***

PFTs are interpreted daily according to a rotating schedule. Elective residents will supervise a limited amount of PFTs and assist in their interpretation daily. Cardiopulmonary exercise tests are conducted and interpreted by Drs. Chronakos, Mendez, and Oelberg. Residents are encouraged to attend at least one test and to learn the basic principles of interpretation. Sleep studies are conducted in our six-bed sleep center, are read daily by the sleep boarded sleep specialists. Residents are invited to participate in the technical scoring and reporting of these studies.

### ***4. Pulmonary Rehabilitation Center and Bronchoscopy Suite:***

Residents will have the opportunity to observe procedures at the bronchoscopy suite, and to observe patients participating at our rehabilitation center.

### ***5. Didactic Sessions:***

- i. Western Connecticut Pulmonary Conference** – last Thursday of the month, at the Praxair Conference Room. This conference, led by a pulmonary medicine faculty member or invited speaker, is devoted to a core pulmonary topic (e.g. asthma, interstitial lung disease, COPD, pneumonia, thromboembolic disease, pulmonary hypertension). Periodically, the conference functions as journal club.
- ii. Sleep Case Conference** – 2<sup>nd</sup> and 4<sup>th</sup> Wednesday of each month, in the Sleep Center Conference Room. Challenging cases are discussed. Periodically, relevant literature is reviewed.
- iii. Lung Tumor Board** – 2<sup>nd</sup> and 4<sup>th</sup> Tuesday of each month, at the Praxair Conference Room. All new lung cancer cases are reviewed and a consensus management plan is reached.

## **C. Educational Content**

1. Mix of Diseases/Patient characteristics and types of clinical encounters  
Danbury Hospital is a 350-bed, level II trauma center, with a cardiac surgery program, cancer center, six-bed sleep center, and also includes an active cardiopulmonary exercise laboratory, bronchoscopy suite, and pulmonary rehabilitation program.

2. Procedures and services

See categories 3 and 4 above

3. Reading lists, other educational resources

In addition to case-based reading, residents are expected to independently research and read (at textbook and review article levels) about: lung cancer, asthma, interstitial lung disease, COPD, and acid-base disorders. Online Learning: Residents should review JHILC pulmonary modules electively

**D. Method of Evaluation of Resident and Faculty Competence**

After each block rotation faculty provide a review of the resident's competency based performance on Evaluate. In turn the resident evaluates the faculty's performance as well as the rotational experience. These evaluations are reviewed during our biannual House staff evaluation committee meetings.

Preceptors will evaluate the Resident's performance. At the beginning of each rotation the preceptors will review the goals and objectives of the rotation with the resident. A meeting at the end of the rotation to review the resident's progress will also take place. It will be the resident's responsibility to schedule the final review with the MD preceptor. Formal written evaluations (Evaluate) will be completed and are incorporated into the semiannual performance reviews. In addition these evaluations will be presented to the semi annual house staff committee for discussion.

1. **Resident Performance** – The Faculty complete a web-based electronic competency-based resident evaluation form and also provide oral feedback. Evaluations are shared with the resident, available for on-line review by the resident at his/her convenience, and are incorporated into semi-annual performance reviews for directed resident feedback.
2. **Program and Faculty Performance** – Upon completion of the rotation, residents complete a service evaluation form commenting on the faculty, facilities, and service experience. These evaluations are sent to the residency office for review and the attending faculty physician receives anonymous copies of aggregate evaluations when sufficient evaluations are present to protect resident confidentiality.

**E. Rotation Specific Competency Objectives**

Please refer to the Core Curriculum for the expected General Medicine Curriculum core competency objectives. The rotation specific objectives are provided below.

- **Patient Care** – By the end of the rotation, residents should be able to:
  1. Complete a comprehensive pulmonary consultation, including identification, chief complaint, history of present illness, past history, review of systems, personal and social history and complete a physical examination with particular focus on the pulmonary examination.

2. Evaluate and manage obstructive, restrictive, and thromboembolic pulmonary diseases; manage, cough, hemoptysis, and asthma, at various levels of severity; and be able to recognize and respond to signs of impending respiratory failure.
  3. Interpret PFTs, ABGs, CXRs, and chest CT, and participate in the reading of sleep and exercise studies.
- **Medical Knowledge** – By the end of the rotation, residents should be able to:
    1. Describe the physiology of obstructive and restrictive pulmonary disease.
    2. Understand the action and pharmacology of common pulmonary medications, including bronchodilators, steroids, other anti-inflammatory agents, and ancillary therapies. Residents should also understand the pulmonary side effects of medications.
    3. Understand and describe the evaluation / management of sleep disorders, solitary pulmonary nodule, pleural effusions, interstitial lung disease, pulmonary hypertension, and mycobacterial disease.
  - **Interpersonal and Communication Skills** – By the end of the rotation, residents should be able to:
    1. Develop skill at communicating with primary service teams as a consultant.
    2. Develop effective communication skills with patients who have serious and/or life-threatening pulmonary disorders, as well as with their families.
  - **Professionalism** – By the end of the rotation, residents should be able to:
    1. Proactively communicate with the pulmonary faculty to ensure that all learning opportunities (PFTs, sleep study, pulmonary office time, inpatient consultations, and conferences) are scheduled and attended.
    2. Professionally represent the Pulmonary Consult service during consultative activity through timely and appropriate communication.
  - **Practice-Based Learning** – By the end of the rotation, residents should be able to:
    1. Use the library resources and the hospital to search the medical literature, critically appraise articles, and apply evidence to the care of patients.

2. Facilitate the education of medical students, who are on the pulmonary service.

- **System-Based Learning** – By the end of the rotation, residents should be able to:

1. Cooperatively work as a team member with technicians who perform pulmonary testing, respiratory therapists, and office staff.
2. Support and facilitate pulmonary guideline care to enhance healthcare quality and cost effective initiatives.
3. Reflect awareness of reimbursement criteria for CPAP, ventilator and oxygen support for chronic pulmonary conditions and sleep disorders.