

**BRIDGEPORT HOSPITAL
PULMONARY DISEASE FELLOWSHIP
CURRICULUM**

Updated: December, 2009

OVERVIEW

Bridgeport Hospital's Pulmonary Disease Fellowship Program is a two-year training program. The curriculum will enable internal medicine-trained physicians to master the intellectual and procedural skills of Pulmonary Medicine. Graduates of the program will have acquired the skills and experience required to sit for the American Board of Internal Medicine Examination in Pulmonary Medicine.

TRAINING SITES

Bridgeport Hospital is the primary training site at which fellows spend >85% of their training. Other training sites have included Yale New Haven Hospital (YNHH) and the Hospital for Special Care (HSC). Trainees also have performed electives in the private offices of Pulmonary and Internal Medicine Associates.

FACULTY

Full-time, hospital-based faculty:

David Kaufman, MD, Section Chief of Pulmonary Medicine. ABIM certified in Internal Medicine, Pulmonary Disease and Critical Care Medicine.

Constantine Manthous, MD, Chief of Medical Intensive Care Section, Program Director Internal Medicine Training Program, and Associate Clinical Professor at Yale. ABIM certified in Internal Medicine and Critical Care Medicine.

Armand Wolff, MD, Director Pulmonary Medicine Fellowship. Medical Director Sleep Center. ABIM certified in Internal Medicine, Pulmonary Medicine, and Critical Care Medicine. ABSM certified in Sleep Medicine.

Jeffrey Kwon, MD, Assistant Medical Director Sleep Center. ABIM certified in Internal Medicine, Pulmonary Medicine, and Critical Care Medicine.

Private practice faculty:

Arthur Turetsky, MD, Senior Attending. ABIM certified in Internal Medicine and Pulmonary Medicine, and ABSM certified in Sleep Medicine.

Daniel Rudolph, MD, Senior Attending ABIM certified Internal Medicine, Pulmonary Disease, and Critical Care Medicine.

Adil Salam, MD, Junior Attending. ABIM certified Internal Medicine and Pulmonary Disease., and ABSM certified in Sleep Medicine.

John Ayala, MD, Junior Attending. ABIM certified in Internal Medicine, Pulmonary Medicine, and Critical Care Medicine.

Part-time faculty

Arthur Kotch, MD, Senior Attending, ABIM certified in Internal Medicine and Pulmonary Medicine, and ABSM certified in Sleep Medicine.

EDUCATIONAL OBJECTIVES – FORMAL CURRICULUM

At the beginning of training, fellows receive a hardcopy of the entire 2-year curriculum. Prior to each rotation, fellows are given a copy of the specific educational objectives of each rotation (including a summary of their responsibilities and schedule). After reviewing the objectives, they attest to having done so by signing the objectives. These are kept in the personal file of each trainee. The overall curriculum and objectives of each rotation are reviewed periodically in Section meetings.

Certain educational experiences (i.e. outpatient pulmonary medicine, allergy-immunology) are achieved through longitudinal sessions conducted throughout the fellowship. Likewise instruction in Sleep Medicine is provided longitudinally, with the fellows assisting in Sleep Laboratory activities throughout the fellowship. Other educational objectives (e.g. RRC essentials) are covered systematically by emphasis during discussions, review, and formal reading assignments associated with each rotation. Consultations on patients with disease processes emphasized during a particular block will be used as points of departure to emphasize teaching points in the formal reviews and readings. Additionally, trainees are exposed to other pulmonary diseases in the course of patient care/consultations.

The included curriculum is an outline of subjects covered formally and serves as a guide for self-study and structured discussions of pathophysiology topics during rounds. The curriculum includes all aspects required for pulmonary training as outlined in the Residency Review Committee's Essentials.

Structure/Schedule of Training (in 4 week-blocks)

F1:	Pulmonary Consultation Service (PCS)	7 months
	Critical Care (CCM)	3.5 months
	Ambulatory/Research/Elective	1.5 months
F2:	Pulmonary Consultation Service	5.5 months
	Critical Care	2.5 months
	Pulmonary Rehabilitation/HSC	1 month
	Ambulatory/Research/Elective	3 months

LINES OF RESPONSIBILITY AND SUPERVISION

Pulmonary Consultation Service

The fellow will respond within 24 hours to provide consultations requested of the Pulmonary Consultation Service. The fellow will perform a history and physical examination, formulate a differential diagnosis and develop a plan for further evaluation and management.

This evaluation will be discussed with the supervising pulmonary specialist. Formal recommendations will be communicated via a consultation note and, if appropriate, by direct discussion with the referring physicians. The patient will also be informed of the attending pulmonologist's clinical impression and recommendations. The fellow is expected to establish the urgency and priority the patients' problems and respond accordingly. The role of the attending is to verify the historical facts and physical findings related by the fellow, review laboratory tests and imaging studies, critique the presentation, and further discuss the findings and recommendations. The attending will personally evaluate all new consultation patients in a timely fashion.

When an Internal Medicine resident or medical student is on the consult service they will be supervised by the fellow and/or the attending. They will have the opportunity to evaluate the patients and write preliminary consultation notes. They will see their patients in follow up as needed, and discuss their findings with the fellow and attending.

Should the patient require diagnostic or therapeutic procedures it is the fellow's responsibility to optimize the patient's condition in preparation for that procedure, inform the patient of the rationale for the procedure as well as the associated risks and benefits, and obtain appropriate written informed consent. The fellow will order appropriate premedication and discuss conscious sedation with the attending physician. The fellow will follow up on the results and ascertain the patient's clinical stability post procedure. All procedures are to be supervised by an attending except in cases of emergency.

During their rotation on the Pulmonary Consultation Service, the trainee will interpret all pulmonary function studies and discuss them with the attending. The Pulmonary Consult and PIMA fellows are expected to attend all scheduled conferences. They will also attend the longitudinal outpatient clinics as assigned. The ICU fellow is excused from the didactic sessions (but should attend if at all possible) and from the weekly clinic.

Critical Care Medicine

Fellows in the MICU work closely with the assigned pulmonologist/intensivist in the MICU alongside the patients' primary care physicians to provide comprehensive care. The fellow is directly responsible to the critical care attending. They will also for oversee residents and students in evaluation, resuscitation, and management of the patients.

Policy on non-teaching service patients

The fellow has no responsibility to take part in the care of non-teaching service patients. As there are no non-teaching patients on the Team Care Consult Service or in the Medical Intensive Care Unit, this will not be encountered. On the Private (PIMA) Consult Service, there may at times be patients without pulmonary disease issues, and the fellows shall not be expected to be involved in their care. This is a requirement of the ACGME and is the official policy of the Section of Pulmonary, Critical Care, and Sleep Medicine. Fellows are expected to assist with and actively participate in the care of patients in severe distress and with life-threatening emergencies anywhere in the hospital if such assistance is requested by anyone at anytime.

In-patient Pulmonary Consultation Service (PCS)

	Monday	Tuesday	Wednesday	Thursday	Friday
7 - 8		SLEEP TOPICS: PSG INTERPS, LECTURES, BOARD REVIEW QUESTIONS (OPTIONAL)		PULMONARY BOARD REVIEW SERIES (OPTIONAL)	
8 - 12	8 - 11 PULMONARY ROUNDS 11 - 12 MEDICAL MORNING REPORT	8-11 PULMONARY ROUNDS 11 -12 MEDICAL MORNING REPORT	8 - 12 PULMONARY ROUNDS	8 - 11 PULMONARY ROUNDS 11 -12 MEDICAL MORNING REPORT	8:30 - NOON PULMONARY CONTINUITY CLINC
Noon Lecture Series	DEPT INT MED RESEARCH CONFERENCE 1 ST MONDAY RESEARCH UPDATE AND JOURNAL CLUB OTHER MONDAYS	PULMONARY PATHO- PHYSIOLOGY CONFERENCE	1 ST WEEK PULMONARY PATHOLOGY- RADIOLOGY SERIES 2 nd WEEK PATHOLOGY REVIEW WITH PATHOLOGIST OTHER WEEKS CASE PRESENTATION LECTURE SERIES	MEDICINE GRAND ROUNDS	
1-5	DICTATED BY FELLOWS' ASSIGNMENT DEVOTED TO RESEARCH ACTIVITY UNLESS OTHER DUTIES SUPERCEDE	DICTATED BY FELLOWS' ASSIGNMENT DEVOTED TO RESEARCH ACTIVITY UNLESS OTHER DUTIES SUPERCEDE	2:30 - 5:00 YALE STATE CHEST CONFERENCE	DICTATED BY FELLOWS' ASSIGNMENT DEVOTED TO RESEARCH ACTIVITY UNLESS OTHER DUTIES SUPERCEDE	1:00 - 2:00 CLINIC WRAP UP DISCUSSION OF INTERESTING OR CHALLENGING CASES FROM THE CLINIC FOLLOWED BY INFORMAL MEETING WITH PROGRAM DIRECTOR AS REQUIRED

The lecture series and the State Chest Conference at Yale become the Pulmonology Core Lecture Series July-September.

OVERVIEW OF THE PULMONARY MEDICINE CURRICULUM

No curriculum can illuminate ALL of the content that a Pulmonary fellow must learn in order to become a proficient and compassionate clinician. The Pulmonary Consultation Service rotations are the center of the clinical fellowship; through them the fellows are exposed to most diseases in Pulmonary Medicine over the course of their 2 years of training during:

- a. PCS consultations (in which diseases/pathophysiology are discussed case-by-case and recorded in the Fellow's case log-book),
- b. Discussions of pulmonary cases in Morning Report and Pulmonary conferences,
- c. Didactics,
- d. Formal, systematic review of the PCS and cardiopulmonary critical care curricula.

Rare diseases/syndromes may not be encountered during clinical rotations. These will be discussed through literature reviews and didactic lecture series. They may also be encountered through outpatient exposure.

Pulmonary physiology topics will be discussed during conferences and informal discussions. A more practical exposure will be derived through interaction with the pulmonary function testing (PFT) laboratory and with the respiratory therapy staff.

Exposure to Sleep Medicine topics will occur during didactic sessions as well as consultative services in both the inpatient and outpatient settings. Practical knowledge will be obtained through interaction with the Sleep Center staff. The fellow will also participate in Sleep Center outpatient activities while on the ambulatory block.

The systematic review of Pulmonary Medicine topics is taken directly from the RRC list of essentials. Although the clinical cases encountered over the course of the fellows' PCS rotations will vary, each rotation will "focus" on broad areas of the curriculum.

Fellows will be required to review and present state-of-the-art articles on topics from the curriculum. This will occur during the course of daily rounds as well as Journal Club and other conferences. These articles are listed as "essential readings" in the curriculum. They are NOT meant to be the only self-study the fellow does. Rather, they will serve as points of departure for additional reading in the various areas of Pulmonary Medicine.

Fellows will be exposed to a variety of clinical problems as they see new consultations. In addition to the systematic "areas of emphasis" for each rotation, fellows are expected to read on the problems/diseases of patients as they perform consultations (and document the exposures in their case log-books).

PULMONARY MEDICINE CURRICULUM: OTHER GENERAL CONSIDERATIONS

Chest Radiology

Radiology studies will be interpreted as part of the daily care of patients. An excellent on-line resource is <http://mypacs.net>. Also helpful, radiologyeducation.com offers an array of multiple sites with free resources to complement self-study. Fraser and Pare's, *Disease of the Chest* is also a valuable resource of differential chest radiography. Other specific Radiology textbooks are available as a source in the Pulmonary Fellow Library.

Furthermore, Radiology topics will be reviewed during the course of formal didactics as well as during rounds. A monthly combined Pathology/Radiology/Pulmonary conference also will provide a venue for review of chest radiography. Also, it may be possible for fellows to spend time individually in the radiology department.

Pulmonary Pathology

Each month there is a combined Pathology/Radiology/Pulmonary case conference as a focused pulmonary pathology slide review with a staff Pathologist. On a more informal basis review of pulmonary pathology specimens will be undertaken with a staff pathologist as practicable.

Procedures (in general, all procedures should be supervised by an attending)

1. Fiberoptic bronchoscopy (FOB) - Minimum of 4 hours performing FOB with the artificial lung, using the atlas of anatomy. Observe 2-3 FOB and then perform 20 under direct attending supervision, documenting experience in a procedure logbook. This includes procedures such as bronchoalveolar lavage, endo- and trans-bronchial biopsy, and transtracheal needle aspiration of lymph nodes. Performance of a minimum of 20 FOB (and sub-procedures) and certification of proficiency by Program Director are required to perform independently.
2. Thoracentesis – For those entering the program already ABIM certified in thoracentesis, performance of 3 procedures observed by Pulmonary Section faculty is required to obtain certification of proficiency by the Program Director. For those fellows who are not already ABIM certified, a minimum of 5 directly observed thoracenteses will be required.
3. Central venous lines and pulmonary artery catheters – For those entering the program already certified, a minimum of 3 procedures directly supervised by the Pulmonary Section faculty will be required before they can be performed independently. Pulmonary artery catheterization will always require supervision by the faculty.
4. Chest tube thoracostomy, endotracheal intubation, pulmonary artery catheterization and pleural biopsy will only be performed under direct supervision of an attending physician.

As the fellow progresses through training, more independence will be afforded them. However, **ALL PROCEDURES MUST BE DISCUSSED WITH THE ATTENDING STAFF PRIOR TO PERFORMANCE, EVEN IF THE FELLOW IS CERTIFIED TO PERFORM THEM INDEPENDENTLY.** The fellows will be responsible for instructing the residents in performing procedures as directed by the attending staff.

OVERVIEW OF THE PULMONARY MEDICINE CURRICULUM

Although the Curriculum is broken down into rotations with specific topics of study and areas of emphasis, there are commonalities found during each rotation/activity pertaining to the six ACGME core competencies:

Medical Knowledge - Expand on the medical knowledge obtained during residency to include more specifics relating to Pulmonary Medicine. This will include topics within Critical Care Medicine as they relate to the pulmonary and cardiovascular systems. Fellows will be expected to read independently the literature pertaining to the disease states encountered while providing consultative services as well as the general Pulmonary Medicine textbooks and literature. Knowledge will be demonstrated during rounds, formal didactic sessions, as well as informal discussions. With progress through the program, fellows will be expected to develop a deeper understanding of pulmonary pathophysiology and to show “higher level” processing of information. Also, the fellows will be responsible for teaching their co-fellows as well as residents and students in both formal and informal environments. Many of the didactic conferences are fellow driven with input from the attending staff.

Patient care – Arrive at 6-7 AM (as required by patient load), pre-round on established patients and begin evaluation of new consultations. Coordinate residents and students on the service to assist. Using pre-rounds as an opportunity to teach residents (both on and off the service) about patients’ problems. Perform initial assessments and develop plans as appropriate with residents and students prior to discussing with attending staff. In general, attending rounds will be held between 9-11 AM, as dictated by the needs of the service. Attending rounds will provide an opportunity for education as well as refining the assessments and care-plans established during pre-rounds. As the fellow progresses through training, higher levels of processing and increasing responsibility for patient care and teaching will be expected.

Interpersonal communication skills – Continue to develop skills required for therapeutic relationships with patients and their families. During the early phase of training, fellows should be observed by the attending staff (i.e. CEX) at least 2-3 times while performing the history and physical exam. This provides an opportunity to refine bedside skills with direct feedback. The fellow will initially observe the attending conduct discussions with family members; as they progress in their training, the fellow will take more of an active role in leading these discussions (initially under the supervision of the attending staff and ultimately without supervision).

Professionalism – The fellow will act as a “junior attending” by coordinating the team’s activities. They will provide timely updates, as appropriate and required, to the attending staff. Begin asserting surrogate leadership in “all areas Pulmonary” in the absence of the attending, especially with the residents and students. The level of leadership expected will increase as the fellow progresses through training. The fellow will, at all times, be expected to present themselves professionally as a member of the section of Pulmonary, Critical Care, and Sleep Medicine. This will include interactions with patients, their family members, and their primary physicians, as well as the hospital’s physician and non-physician staff members.

Practice-based learning and improvement – The fellow will be expected to show a dedication to self-improvement as well as continuing medical education. Throughout their training, fellows will be provided with both formal and informal feedback and constructive criticism; they will be expected to incorporate this into their daily practice. The fellows will attend all conferences offered by the section, will attend the Joint Resident conferences on Scientific Methods, Medical Statistics and Critical Appraisal of the Medical Literature, and will be encouraged to attend Medical Morning Report, Grand Rounds, and other departmental conferences as allowed by clinical schedules. The fellow will assist the attending physician in teaching residents as per the residents' curriculum, and will provide the team with appropriate state-of-the-art articles on patient management germane to cases.

Systems-based learning – The fellow will attend meetings (one each) of the Quality Council and Risk Mortality Committee over the first 6 months of their training. They will attend multidisciplinary rounds regarding their patients as appropriate. They will meet with discharge planners and representatives of Respiratory Therapy Services to evaluate and understand resources available for patients with lung disease. The fellow will spend time with personnel from the Pulmonary Function Laboratory, Respiratory Therapy Department, Pulmonary Rehabilitation, and the Sleep Center to learn the particulars of these aspects of Pulmonary Medicine. The fellow will be expected to participate in some form of quality improvement project either within the Section or the Hospital.

Fellows will be expected to take on greater responsibility for patient care and management as well as educational pursuits during the course of their training. Their level of performance of and progress within each of these areas of core competency will be regularly evaluated by the attending staff, residents and students, the nursing staff, and other staff as appropriate.

Expectations for Progression of ACGME Competencies for Pulmonary Fellows			
Competency	0 – 6 months	6 – 18 months	18 – 24 months
Medical Knowledge	That of a skilled internist	Progressively more in-depth regarding pulmonary medicine	That of a specialist in pulmonary medicine
Patient Care	That of a skilled internist with little supervision	Progressively more independent	That of an independent consultant
IPCS	That of a skilled internist	Progressively more specialized	That of an independent consultant
Professionalism	That of a skilled internist	Commensurate with level of experience	That of an independent consultant
PBL and I	That of a skilled internist	Progressively more involved in pulmonary topics	Dedication to life long learning as a consultant
SBL	That of a skilled internist	That of a developing specialist	That of an independent consultant