

Overview of Goals and Objectives of Rotation: PVAMC Pulmonary Consult Service

PVAMC Pulmonary Consult Director: Mark Chesnutt

Preceptors: Mark Deffebach, Daniel O'Hearn, Molly Osborne, David Lewinsohn, Chris Slatore, Dr. Prendergast

Over the course of training, PCCM Fellows will spend approximately half of their required pulmonary rotations within the VA system. This exposure is intended to provide fellows with the necessary cognitive, technical, and ethical/social skills to manage a host complex of pulmonary conditions including but not limited to 1) chronic obstructive pulmonary disease 2) thoracic malignancies 3) occupational & environmental lung disease and 4) mycobacterial diseases. Working closely with Pulmonary-Critical Care Attendings, Fellows gain familiarity with health care delivery within the context the Veterans Administration system.

Medical Knowledge: *Residents are expected to demonstrate knowledge of established and evolving biomedical, clinical and social sciences, and the application of their knowledge to patient care and the education of others.*

Chronic Obstructive Lung Disease

- Review the GOLD criteria for the diagnosis of chronic obstructive lung disease
- Understand the management goals/principles for 1) acute-on-chronic and 2) chronic obstructive lung disease
- List the criteria for and benefits of home oxygen therapy
- Describe the appropriate role of noninvasive ventilation in COPD exacerbations

Invasive Pulmonary Procedures:

- Describe the indications for / contraindications to fiberoptic bronchoscopy
- Identify airway anatomy and location of adjacent submucosal structures
- Describe methods of obtaining material for examination and describe the appropriate labeling and handling of specimens
- Review safety issues in the storage and maintenance of bronchoscopes
- Understand the indications for 1) thoracentesis 2) small and large bore chest tubes 3) VATS / Thoracotomy

Lung Cancer

- Understand the evaluation and management strategy of the solitary pulmonary nodule
- Describe the radiographic characteristics & behaviour of 1) benign and malignant nodules 2) subsets of lung cancer and 3) non-pulmonary metastatic disease
- Understand the approach to staging lung cancer
- Recognize the limitations to & common complications of pulmonary resection
- Understand the management options for control of malignant pleural effusions
- Review the thoracic complications associated with the use of radiation and chemotherapy

Mycobacterial Disease:

- Understand the different growth and phenotypic differences between species
- Describe the various expressions of mycobacterial disease
- List risk factors for carrying MDRTB
- Review the treatment options and duration of therapy as described in the CDC's Core Curriculum
- Review the principles toxicities of drug therapy and the appropriate tests & intervals for surveillance

Occupational / Environmental Lung Disease:

- List common occupational/environmental agents associated with airway and parenchymal lung disease
- Understand the spectrum of disease associated with inhalation of asbestos and silica

- Recognize the CT appearance of malignant and nonmalignant occupational/environmental lung disease

Pleura / Mediastinal Processes:

- Differentiate transudative from exudative pleural processes
- Describe management options for malignant, infectious, chylous, and ascitic effusions
- List processes leading to mediastinal fibrosis/infectious mediastinitis

Pre-operative Evaluation:

- Explain patient and procedure related risk factors for post-surgical pulmonary complications
- Understand the role that laboratory, PFTs, and chest radiography play in assessing surgical risk
- Describe strategies of proven, probable, possible, unclear and no benefit in management of post-operative pulmonary complications

Pulmonary Function Testing:

- Learn the indications for various pulmonary function tests including spirometry, lung volume measurements, methacholine challenge studies, diffusing capacity for carbon monoxide, six-minute walk, oxygen need evaluation and cardiopulmonary exercise testing
- Identify threshold values for abnormal tests and provide interpretation of results

Pulmonary Rehabilitation:

- Describe the indications and benefits of pulmonary rehabilitation
- Identify the effects that chronic lung disease has on extrapulmonary organ function
- Understand the contribution of depression & anxiety to overall health status in patients with chronic lung disease

Patient Care: *Residents are expected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment of disease and at the end of life.*

First Year Fellows:

- Demonstrate proficiency in use of information systems technology (EPOE, Lifetime Medical Record) to assist in patient care
- Use information technology (BICC, PubMed, National Guidelines Clearing House) to support patient care decisions and patient education
- Learn and practice consultative advice and/or organization and prioritization of studies for further evaluation on patients referred for non-visit consultation.
- Review history and physical findings with Faculty and confirm key elements
- Develop and perform the skills required to 1) safely anesthetize the upper & lower airway prior to bronchoscopy 2) maintain adequate gas exchange during the procedure and 3) recognize and address complications arising from bronchoscopy
- Demonstrate the ability to safely perform diagnostic and therapeutic thoracentesis
- Safely perform chest tube placement in uncomplicated pneumothoraces and pleural effusions
- Read and interpret with supervision service Pulmonary Function Tests
- Identify appropriate candidates for 1) home O2 therapy 2) pulmonary rehabilitation 3) smoking cessation classes
- Identify patient care situations requiring complex management/arrange and participate in patient-centered care conferences (e.g. Tumor Board)
- Demonstrate the ability to identify common abnormalities on chest and CT radiography and provide an initial differential diagnosis

Use data from appropriate invasive and non-invasive monitoring devices to diagnose, treat &/or titrate therapy in patient with the following conditions

- Chronic Obstructive Lung Disease

- Suspected primary lung cancer
- Sleep disordered breathing / Obesity hypoventilation
- Occupational / Environmental lung disease
- Mycobacterial disease
- Patients with thoracic disease undergoing surgical procedures

Senior Fellows:

- Defend management plan using EBM
- Demonstrate safe performance of 1) transbronchial lung biopsy 2) Wang needle aspiration and 3) catheter placement for brachytherapy
- Ensure proper functioning, storage and sterility of bronchoscopes
- Demonstrate basic understanding of the functioning and administration of Pulmonary Function Labs
- Organize and direct the Pulmonary Consult service
- Provide initial consultation and management of Pulmonary Consult patients
- Demonstrate advanced 1) pattern-recognition skills 2) differential diagnosis 3) histopathologic diagnostic skills when reviewing radiographic and pathologic material

Practice based Learning: Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.

Fellows at all levels of training are expected to 1) identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care 2) analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient practice 3) develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care and 4) use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education. Requirements for this competency include;

- Maintain a list of patients experiencing 1) morbidity and mortality 2) delay in diagnosis during evaluation and management
- Review relevant literature surrounding occurrences and present findings to fellows and faculty at monthly M&M conference
- Provide limited “root cause” analysis of significant problems and develop relevant action plans
- Use data from Administrative Quality Improvement projects to analyze care, identify areas for improvement, and implement practice reform
- Support ongoing basic and clinical science protocols by participating in candidate identification or in proposing future projects
- Contribute to and support process improvements in the Clinical Diagnostic Unit by meeting with nursing or physician staff to assess current practice
- Develop knowledge and expertise in the multidisciplinary diagnosis and treatment of lung cancer through participation in Tumor Board and Radiology Conference

Professionalism: Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society.

- Demonstrate respect, compassion, integrity, and altruism in relationships with patients, families, and colleagues
- Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disabilities of patients and professional colleagues
- Adhere to principles of confidentiality, scientific/academic integrity, and informed consent
- Recognize and identify deficiencies in peer performance
- Teach junior colleagues or peers

- Admit to and seek help in remedying errors
- Interact with nursing staff and other professionals as two-way educational opportunities when current approach does not appear to be effective

Interpersonal and Communication Skills: Residents are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.

- Provide effective, timely, and professional consultation to other physicians and health care professionals
- Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families
- Counsel and educate patients and families
- Display support & empathy to patients and their families, as witnessed by attending staff or reported to staff
- Considers ethical issues and patient wishes in treatment decisions
- Maintain comprehensive, timely, and legible medical records

Systems-Based Practice: Residents are expected to demonstrate both an understanding of the contexts and systems in which health care is provided, and the ability to apply this knowledge to improve *and optimize health care*.

- Apply evidence-based strategies to prevention, diagnosis, and disease management
- Interpret drug costs in context of outcomes (e.g., xopenex, spiriva)
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care
- Utilize established quality management procedures to facilitate care (e.g., solitary nodule pathway, CDU)
- Describe how resources and services are generated in government-based health care delivery systems
- Recognize how services (pulmonary rehabilitation, pulmonary function tests) are documented, coded, billed, and reimbursed in different medical practices

Instructional Methods:

Introductory Pulmonary Lecture Series, Web-Based Curriculum (RICU), Weekly Critical Care Fellows Conference, Radiology Conference, Tumor Board, on-line Tutorials

Methods of Assessment:

- Competency-based staff evaluations
- Ancillary care provider evaluations
- Critical incident reporting
- Conference attendance and participation
- Structured evaluations of airway management, central line placement, bronchoscopy

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Pulmonary Rehabilitation in Chronic Obstructive Pulmonary Disease

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Environmental/Occupational Lung Disease:

ATS Occupational Links webpage

<http://www.thoracic.org/sections/clinical-information/environmental-and-occupational/links.html>

NIOSH:National Institute of Occupational Safety and Health

<http://www.cdc.gov/niosh/homepage.html>

Asbestos:

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Epidemiology of lung cancer, Alberg AJ, et al, Chest 123: 21S-49S

Prevention of lung cancer: Summary of published evidence, Kelley MJ, et al, Chest 123: 50S-59S

Lung cancer prevention: The Guidelines, Dragnev KH, et al, Chest 123: 60S-71S.

Screening for lung cancer: A review of the current literature, Bach PB et al, Chest 123: 72S-82S

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Lung Pathology WebPages:

<http://alf3.urz.unibas.ch/pathopic/e/intro.htm>

<http://peir.net/>

<http://pathhsw5m54.ucsf.edu/introduction.html>

<http://www.afip.org/fascicle/LUNGONLINE-SAMPLE/contents.htm>

http://www.som.tulane.edu/classware/pathology/medical_pathology/overview.html#BlockReviews

<http://www.granuloma.homestead.com/>

<http://155.37.5.42/eAtlas/nav/msLung.htm>

http://www.lumen.luc.edu/lumen/MedEd/medicine/pulmonar/path/lpath_f.htm

Pulmonary Consultation Team Fellow Responsibilities/Activities

- The Fellow will organize and supervise the daily activities of the Pulmonary consultation team consisting of internal medicine resident(s) and medical student(s) under the overall guidance of the Staff Pulmonary physician.
- The Fellow will coordinate and perform or supervise all procedures performed by the Pulmonary consultation team under the overall guidance of the Staff Pulmonary physician.
- The Fellow will review all non-visit consultation requests received by the Pulmonary Service, respond to the requesting caregiver, and formulate/undertake a plan of evaluation and treatment of the patient as needed under the overall guidance of the Staff Pulmonary physician.
- The Fellow will review all referrals to the Unexpected Radiographic Findings (URF) Clinical Pathway and make appropriate recommendations for follow up to the Pulmonary Service Nurse Clinical Coordinators.
- The Fellow will schedule and perform all bronchoscopy procedures under the overall guidance of the Staff Pulmonary physician.
- The Fellow will perform or supervise all other diagnostic and therapeutic procedures (as listed above) under the overall guidance of the Staff Pulmonary physician.
- The Fellow will help review all pulmonary function studies, and both assist and teach the more junior members of the team in interpretation of these studies under the overall guidance of the Staff Pulmonary physician.
- The Fellow will present all cases of diagnosed lung cancer to the Multidisciplinary Lung Cancer Committee for discussion, and will attend the Lung Cancer Multidisciplinary Clinic when possible.

Example of Daily Schedule (Monday through Friday)

0730 - 1200	Scheduled broncoscopies or other procedures as needed
0800 - 0900	Review patients scheduled for the Complex Diagnostic Unit (CDU) and Short Stay Unit (SSU) visits. Organize the team to evaluate these patients on arrival
0900 - 1100	Evaluate patients in the CDU or SSU
1100 - 1200	Outpatient Attending Rounds with Staff Pulmonary Physician
1230 - 1630	(Every other Thursday) VA Pulmonary Outpatient Clinic
1200 - 1300	Noon conferences in Internal Medicine (Mon, Tues, Wed) or Pulmonary Grand Rounds (Friday)
1300 - 1600	Evaluate inpatient consults or non-visit consults/URF clinical Pathway referrals
1600 - 1800	Inpatient Attending Rounds with Staff Pulmonary Physician

Education Conferences

Pulmonary & Critical Care Radiology Conference

Wednesdays, 1330-1430
OHSU 10C

Pulmonary & Critical Care Medicine Journal Club

1st Wednesday of each month, 1700-1800
OHSU BRB

Pulmonary & Critical Care Medicine Research Conference

Wednesdays (except 1st), 1700-1800
OHSU BRB

Pulmonary & Critical Care Medicine Grand Rounds

Fridays, 1230-1330
VA Building 101, Room 201

Work days / hours

Monday through Friday

Day-time: In-hospital from approximately 0700 to 1800 (approx. 55 hrs/week)

Night-time: Beeper call from home shared with Fellow on the OHSU Pulmonary Consultation Service

Weekends

Day and night: Beeper call from home shared with Fellow/Residents on the OHSU Pulmonary Consultation Service and Resident on the VA Pulmonary Consultation Service

Fellow will participate in OHSU Critical Care night call coverage during VA Pulmonary consultation rotation – and will have the following day off

Work Space

The Fellow will have their own desk, file cabinet and book shelf space as well as computer access in 4C-100, Room 114. This room is adjacent to the Bronchoscopy and Pulmonary Function Laboratories. Additional desk space, computer access and access to radiologic studies are available in 4C100, Room 101d. This room is adjacent to the Staff physician offices.

Portland VA Medical Center Pulmonary and Critical Care Staff

	Beeper	Office
<u>Physicians:</u>		
William Holden, M.D., Section Chief	*41-2310	4C101c
Mark Deffebach, M.D., Staff Physician	423-6753	4C101b
David Lewinsohn, M.D., PhD., Staff Physician	229-9656	4C101a
Daniel O’Hearn, M.D., Staff Physician	237-0335	4C101e
Molly Osborne, M.D., PhD., Staff Physician	423-9561	4C103b
Mark Chesnutt, M.D., Critical Care Director	514-7846	6C115
<u>Clinical Nurse Coordinator:</u>		
Ann Spencer, R.N.	301-5763	4C102
<u>Clinical Nurse Coordinator:</u>		
Amber Hutchinson, R.N.	920-3013	6C150
<u>Bronchoscopy Technician:</u>		
Carol Allen, L.P.N.	*41-998	SSU
<u>Clinical Coordinator:</u>		
Shawn Adams	*41-2050	4C102
<u>Sleep Lab Coordinator:</u>		
Theresa Shearer	938-2606	Sleep Lab
<u>Home Oxygen Coordinator:</u>		
Keary Davis	237-1710	4C103a
<u>Pulmonary Function Techs:</u>		
Mike Marr	ext. 55644	4C104
Robert Feigum	ext, 56057	4C104