CURRICULUM
PULMONARY/CRTICAL CARE CONSULT SERVICE

Faculty Representative: Brian Morrissey, MD
Program Director Review: Craig Keenan, MD
Resident Reviewer: William Amess, MD
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I. EDUCATIONAL PURPOSE AND GOALS

Respiratory related complaints are the leading cause of outpatient care visits and respiratory
diseases taken as a group are a leading cause of death in the United States, as such an experience
and understanding of respiratory and pulmonary diseases is fundamental and important to ensure a
successful and productive practice as an Internist.

The purpose of the Pulmonary elective rotation for residents is to provide an exposure to sub-
specialty patient care and medical knowledge, to demonstrate the range of disease, diagnostic
modalities and therapeutic possibilities for pulmonary diseases and provide an opportunity for
residents to hone basic Internal Medicine skills and competencies within the realm of pulmonary
diseases.

II. PRINCIPAL TEACHING METHOD(S)

A. Direct Supervised Patient Care: The teaching methods will be supervised direct patient care,
small group teaching and self-directed reading. The housestaff will be considered a member of the
inpatient consultatory pulmonary service and as such participate in the providing of consultative
services to the hospitalized patients. Independent evaluations will be performed by rotating residents
under the direction of the pulmonary fellow and attending physician. Additional patient care education
will occur at one or more of the half day Pulmonary Disease Clinics. The availability of the clinics and
the participation of the residents in the clinic will depend on the resident’s continuity clinic and didactic
schedules. These opportunities include clinics in cystic fibrosis, asthma, pulmonary hypertension,
thoracic cancers and general pulmonary disease.

Small group and one-on-one didactic activities will be based on issues raised during patient care
conferences, review of pulmonary function testing and interpretation of chest radiographs. Additional
participation in core fellows conferences is expected (1:30 Tuesday afternoon case
conference/pathology review/journal club, 7:30 Thursday morning core lecture series).

III. EDUCATIONAL CONTENT

A. Case Mix: A range of patients–by disease severity socioeconomic status, country of origin – and
a wide variety of problems–pneumonia, abnormal radiographs, dyspnea and respiratory insufficiency
-make up the inpatient clinically based content. Outpatient based experiences vary by subset as
noted in section II. Fundamental skills of pulmonary function test, thoracic radiograph and blood gas
interpretation are also stressed.

B. Clinical Venues: Residents will see patients at the UC Davis Medical Center and in the
Pulmonary Diseases Clinics at 2825 J Street, Suite 400.
C. **Procedures:** Residents may be able to perform the following procedures while on the consult rotation: arterial blood draw, central venous catheter placement, thoracentesis, bronchoscopy.

IV. **EDUCATIONAL GOALS AND OBJECTIVES**

Unique areas as they relate to pulmonary diseases and consultative medicine will be provided in the competencies of patient care, medical knowledge, communication skills. Systems based practice-base learning and professionalism will be observed and evaluated as well. Specifically during the pulmonary resident elective, the **patient care** competency will focus on skills necessary to obtain a precise and careful physical examination of the respiratory system, review of complicated medical records with a distillation of focused assessments, the observation and potential participation in bronchoscopies with understanding of the indication and complications. Additional patient care related activities will relate to management of pulmonary infections, thoracic cancers, acute breathlessness, abnormal radiographs and obstructive lung disease.

Another rotation specific competency is **medical knowledge.** During the pulmonary resident elective, the reading list and self-directed reading regarding patient questions and diagnostic problems are integral to the rotation. As a consult team member, the rotating residents on the pulmonary consult service will have the opportunity to model and develop the skills for **communicating** with various different medical services at consultatory level. Additionally, with participation in the outpatient setting, residents will have the opportunity to teach and review system based practice in regards to chronic respiratory disease management under the observation of attending physicians.

A. **Rotation specific competencies.** Expectations and the progression of competency will be adjusted based on the qualifications and competency status of the rotating resident. Residents are not expected to participate more than once during their Internal Medicine Residency thus no rotation specific progression is expected.

The following areas will be evaluated to determine the progress of residents at the end of the rotation:

**Patient Care**

- Complete a comprehensive pulmonary consultation including identification, chief complaint, history of present illness, past history, review of systems, personal and social history and complete physical examination with particular focus on the pulmonary examination.
- Interpret PFTs and ABGs, and chest x-rays, and understand the relative diagnostic features of V/Q scans and chest CT.
- Recognize and respond to signs of impending respiratory failure.
- Residents will participate in the performance and reading of sleep studies.
- Evaluate and manage obstructive, restrictive, and thromboembolic pulmonary diseases. Manage asthma at various levels of severity.
- Recognize clinical presentations of exercise-induced asthma, cystic fibrosis, pulmonary hypertension.
- Appropriately manage patients with hemoptysis

**Medical Knowledge**

- Describe the physiology of obstructive and restrictive pulmonary disease.
Understand the action and pharmacology of common pulmonary medications including bronchodilators, steroids, other anti-inflammatory agents, and ancillary therapies.

Understand the use of invasive and noninvasive (including CPAP and NIPPV) ventilation.

Understand and describe the initial evaluation for sleep disorders, solitary lung nodule, pleural effusion, interstitial pneumonia, latent tuberculosis, COPD, asthma, and pneumonia.

Interpersonal and Communication Skills

- The resident will develop skill at communicating with primary service teams as a consultant.
- The resident will document their initial consultation and follow up notes in the medical record in a timely and accurate manner. Recommendations to the primary team will be clearly delineated. Residents will contact the primary team directly for important or urgent issues.
- The resident will communicate effectively with patients who have severe and life threaten pulmonary conditions, as well as with their families.

Professionalism

- The resident will professionally represent the Pulmonary & Critical Care Consultants during consultative activity through timely and appropriate communication.

Practice Based Learning and Improvement

- The resident will use library and internet resources at UC Davis Medical Center to search the medical literature, critically appraise articles, and apply evidence to the care of patients.
- When students are on the pulmonary service, residents will facilitate their education.

Systems Based Practice

- The resident will cooperatively work as a team member with technicians who perform pulmonary testing, respiratory therapists, and other ancillary staff.
- The resident will support and facilitate pulmonary guideline care to enhance healthcare quality and cost-effective initiatives.
- The resident will reflect awareness of reimbursement criteria for home oxygen support for chronic pulmonary conditions.

V. ANCILLARY EDUCATION MATERIALS

A. Reading list. A current reading list will be maintained for housestaff reference on the UC Davis mycourses site:

mycourses.ucdmc.ucdavis.edu > PCCM > resources > Housestaff Reading.

VI. METHODS OF EVALUATION

Residents will be provided with two main methods of assessment, one will be face to face immediate feedback. Additionally, using an E*Value semi-confidential system their demonstration of progression within the core competencies will be evaluated. Similarly, the housestaff will have the opportunity to
assess the attending physician, fellow and rotation using semi-anonymous E*Value evaluation system.

VI. SUPERVISION

The resident’s supervision will be provided by faculty of the Pulmonary/Critical Care Division for all patient related activities. The supervision will be within the recommendations of the medical staff of the University of California, Davis Medical Center. Additional supervision may also be provided by fellows.

VII. STRUCTURE OF ROTATION

A. Resident Schedule: While the Pulmonary Consult Service is a 24 hours a per day service, residents are expected to participate for a full typical work day, five days per week. Typical schedules for each day would include initial work rounds by the resident with consultation of the pulmonary fellow followed by teaching rounds with the attending physician and review of new consult patients. Start times vary by season and attending. The remainder of the day depending on other activities would include pulmonary function testing interpretation, participation in outpatient clinics and attendance at pulmonary disease conferences.

B. Duty Hours: The Pulmonary Consultation Service resident usual duty hour requirements are less than nine hours per day, five days per week. More typically, work days are completed within approximately seven hours. Residents are not expected to perform overnight call services nor participate on weekends.