

Sleep Medicine
Rotation Goals and Objectives
Pulmonary/Critical Care Medicine Fellowship Program
University of Nebraska Medical Center
Revised: March 2010

- I) Rotation Goals
 - A) To accrue clinical experience in the evaluation, diagnosis and management of patients with sleep disordered breathing, parasomnias and other sleep disordered
 - B) The objective of the sleep medicine rotation is to provide sufficient exposure and experience in the field of sleep medicine to understand how to approach, work up and treat the sleep disordered patient
 - C) To develop skills required of a good consultant
 - D) To gain medical knowledge in the field of sleep medicine

- II) Core competencies for this rotation
 - A) Patient Care
 - 1) To manage patients with a variety of illnesses common to a general pulmonary practice that includes sleep medicine
 - 2) To order appropriate testing required for the diagnosis and treatment of sleep disorders
 - 3) Describe the differential diagnosis of hypersomnolence and insomnia to the attending for the most common adult sleep disorders that present to an adult sleep clinic
 - 4) Give the new sleep apnea patients handouts and describe the treatment and complications of sleep apnea until the patient voices understanding
 - 5) To demonstrate proper management of therapy for sleep disorders
 - 6) To demonstrate an ability to work with others to provide patient-focused care
 - 7) Evaluation methods for this competency
 - (a) Attending evaluation
 - (b) Clinic nurses, sleep medicine physician assistant, Division DME coordinator and the Sleep center staff evaluations
 - (c) Mini-CEX (to be arranged with attending)

 - B) Medical Knowledge
 - 1) Demonstrate a fund of knowledge commensurate with the level of training
 - 2) Demonstrate an ability to use that knowledge to solve outpatient-based medical problems
 - 3) To read any seminal literature covering topics in sleep medicine
 - 4) To read the appropriate chapters in a Sleep Medicine text covering topics in sleep disordered breathing, central hypoventilation syndromes and parasomnias.
 - 5) In the sleep clinic, describe how a polysomnogram is done.
 - 6) Describe the cardiovascular complications of untreated sleep apnea to the supervising attending using the assigned reading as listed in the schedule
 - 7) Evaluation methods for this competency
 - (a) Attending evaluation
 - (b) Chart-stimulated recall sessions

 - C) Practice-based Learning and Improvement

- 1) Select one performance measure to demonstrate improvement over the course of the month in clinic
- 2) Demonstrate an ability to locate and apply scientific evidence to the care of patients including the use of the Cochrane Database and other online sources
- 3) Demonstrate an ability to read and critically appraise at least one clinical study applicable to a patient seen in clinic
- 4) Facilitate the learning of other health care professionals
- 5) Present a case conference or journal article approach of a sleep disorder and how the patient could be approached better with constructive changes to patient care for improved outcome
- 6) Evaluation methods for this competency
 - (a) Attending evaluation
 - (b) Chart-stimulated recall sessions

D) Interpersonal & Communication Skills

- 1) Demonstrate an ability to develop a therapeutic relationship with patients and their families
- 2) Demonstrate an ability to use verbal and non-verbal skills to communicate effectively with patients
- 3) Present each new sleep medicine patient scheduled for a consultation with an educational handout to take home and verbally explain the information
- 4) Demonstrate an ability to work effectively as a team member or leader
- 5) Demonstrate an ability to develop professional relationships with residents, students and other members of the health care team
- 6) Evaluation methods for this competency
 - (a) Attending evaluation
 - (b) Evaluations from key consultants
 - (c) Evaluations from clinic nurses, sleep medicine physician assistant, Division DME coordinator and the Sleep Center staff
 - (d) Mini-CEX

E) Professionalism

- 1) Demonstrate integrity and honesty
- 2) Treat patients with compassion
- 3) Accept responsibility for direct patient care activities
- 4) Always act in the best interest of the patient
- 5) Demonstrate a sensitivity to patient's ethnicity, age and disability
- 6) Evaluation methods for this competency
 - (a) Attending evaluation
 - (b) Evaluations from key consultants
 - (c) Evaluations from clinic nurses, sleep medicine physician assistant, Division DME coordinator and the Sleep Center staff
 - (d) Mini-CEX

F) System-based Practice

- 1) Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society
- 2) Practice cost-effective health care and resource allocation that does not compromise quality of care

- 3) Advocate for quality patient care and assist patients in dealing with system complexities.
- 4) Explain the sleep center procedure, treatment options, how to contact the clinic and the sleep center for follow-up, and give the patient a handout on sleep testing with physician contact information
- 5) Evaluation methods for this competency
 - (a) Attending evaluation
 - (b) Evaluations from key consultants
 - (c) Evaluations from clinic nurses, sleep medicine physician assistant, Division DME coordinator and the Sleep Center staff
 - (d) Mini-CEX

III) Instructional Methods

A) Clinical experience on this rotation

- 1) The PCCM fellow on this rotation spends up to a full calendar month on the Sleep Medicine Rotation in the UNMC Physicians Clinic at the Nebraska Medical Center, providing high quality and timely care to include:
 - (a) Consultative care for sleep medicine outpatients in the UNMC Physicians Clinic.
 - (i) Patients will be seen in Sleep Medicine Clinic.
 - (b) Primary care for patients seen in Pulmonary, Critical Care, Sleep Medicine and Allergy Section subspecialty clinics
- 2) The Sleep Medicine section of The Nebraska Medical Center will provide access for the subspecialty resident to become familiar with the performance of the following studies:
 - (a) Polysomnography
 - (b) multiple sleep latency test
 - (c) maintenance of wakefulness test
 - (d) nocturnal oximetry test
- 3) The sleep medicine physicians of The Nebraska Medical Center will allow the subspecialty resident to evaluate patients referred for potential sleep disorders and to assist in their management of these patients

B) Clinical Teaching

- 1) Faculty will be expected to discuss each clinical presentation by the fellow and provide guidance as needed on diagnosis and treatment
- 2) The fellow will be expected to gather appropriate data and present in a succinct, yet complete manner

C) Performance Feedback

- 1) The faculty will provide feedback on a regular basis, at least weekly, on what the fellow has done well and what could be improved

D) Didactic Sessions

- 1) Attend all scheduled education conferences within the Division, including all multidisciplinary sleep medicine conferences, which take precedence over other Division activities.

2) Attend all internal medicine conferences as appropriate.

E) Self-Learning

- 1) Review literature appropriate to care of patients in the sleep medicine clinic.
- 2) Fellows will be expected to read the appropriate chapters in a Sleep Medicine textbook of their choice. Appropriate sections of eMedicine or Up-to-Date may be substituted.
- 3) Complete the reading assignments as outlined below. Time not scheduled in clinic should be used for completing the readings.

IV) Responsibilities

A) Fellow

- 1) These guidelines for the Sleep Medicine rotation will be made available to each fellow and must be read prior to starting the rotation
- 2) Participate in all patient care responsibilities expected in the clinic
- 3) Provide education to any residents or students who may be assigned to the clinic.
- 4) Complete an evaluation of the rotation and the attending.
- 5) Take at-home call as scheduled

B) Clinic Attending

- 1) These guidelines for the Subspecialty Outpatient rotation will be made available to clinic attendings and the attending-specific goals and objectives must be reviewed with the fellow at the start of the rotation
- 2) The attending should review the clinic schedule prior to the day of clinic to provide reading assignments for the fellow regarding specific problems to be seen. This makes the interaction a greater learning experience for the fellow.
- 3) Supervise procedures performed by the fellow
- 4) Provide education to the fellow regarding management of patients
 - (a) Education will include instructions on filling out the billing sheet for the attending's clinic
 - (b) Attendings are encouraged to arrange time to discuss topics or specific readings related to the patient problems typically seen in their clinic or for chart-stimulated recall sessions.
- 5) Complete an evaluation of the fellow.

C) Rotation

- 1) Sleep Clinic Responsibility
 - (a) Attend each assigned clinic unless excused by the attending for that clinic
 - (b) Be in the clinic at the assigned start time and remain until excused by the attending
 - (c) The subspecialty resident will meet with the The Nebraska Medical Center sleep physicians to schedule mutually agreeable times to review the sleep studies applicable to return patients seen in the sleep clinics
- 2) Sleep Laboratory
 - (a) The fellow will spend sufficient time in the sleep lab or with the sleep medicine attending to become familiar with the performance and scoring of tests, which are performed in the lab.
 - (b) The subspecialty resident is responsible for interpretation of at least 5 to 10 sleep studies that must first be reviewed with the attending

- 3) Sleep Medicine Conferences
 - (a) The subspecialty resident will be responsible for presenting the cases in conference during this month (or the journal club as assigned - see (3) below) and will review the cases either with one of the associated faculty providing care for the patient's sleep disorder.
 - (b) Epilepsy Conference must be attended unless a previously assigned PCCM conference is required as per the PCCM curriculum.
 - (c) The subspecialty resident must present 1-2 sleep articles at Journal Club (or the case conference as assigned - see (1) above) from a peer-reviewed journal published within the last 18 months
- 4) On Call Responsibility
 - (a) Be available from 8:00 am to 5:00 PM except for officially sanctioned events, i.e. any section conferences
 - (b) Take after hours call as assigned by the Program Director.
- 5) Vacation
 - (a) No more than one week of vacation is permitted during this rotation.
 - (b) Emergency leave may be requested after discussion with the Program Director or surrogate (Sleep Medicine attending for days to be missed)

V) Methods of Evaluation

- A) Focused Observation and Evaluation
 - 1) The Sleep Medicine Attending should give immediate feedback after each patient presentation and a formal verbal evaluation should be given at the mid-point of the rotation.
- B) Clinical Performance Ratings
 - 1) The sleep medicine attending must prepare a written evaluation of the fellow at the conclusion of the rotation. This evaluation will assess each of the competencies as listed in the educational objectives above.
 - 2) The assessment should be reviewed personally by the fellow in the presence of the attending physician.
- C) 360 degree Assessment
 - 1) Evaluations will be sent to health care professionals in sleep medicine who interact with the fellow. They will include PA's, Nurse Practitioners, Nurses, Respiratory Therapists and Clerks. These evaluations will focus on the fellow's professionalism.
- D) Fellow Evaluations of Attending(s) and Rotation
 - 1) At the conclusion of the fellow's service period, he/she should complete an evaluation form assessing the quality of the rotation; he/she should also address the teaching undertaken by the attending physician(s).

VI) Readings

- A) Readings for the sleep medicine rotation will include the following resources: These are available in the Sleep library within the Division

B)

- 1) The AASM Manual for the Scoring of Sleep and Associated Events: Rules, Terminology and Technical Specification; AASM 2007. Edited by Con Iber, MD, assisted by a Steering Committee that included Sonia Ancoli-Israel, PhD, Andrew Chesson Jr., MD and Stuart Quan, MD.
- 2) The Atlas of Clinical Polysomnography: Nic Butkov, 1996. Vol. I
 - (a) Polysomnography An Overview, pg. 3-12
 - (b) Polysomnogram Scoring & Interpretation, pg. 15-35
 - (c) Clinical Record Samples, pg. 38-183
- 3) Principles and Practice of Sleep Medicine: 4th Ed., Elsevier Saunders Co., Phil., PA 2005
This book is available in the section library
 - (a) The following chapters are required reading:
 - (i) Chap. 2 - Normal Human Sleep: An Overview
 - (ii) Chap. 3 - Normal Aging
 - (iii) Chap. 4 - Daytime Sleepiness and Alertness
 - (iv) Chap. 17 - Respiratory Physiology: Central Neural Control
 - (v) Chap. 18 - Respiratory Physiology: Control of Ventilation
 - (vi) Chap. 19 - Respiratory Physiology: Breathing in Normal Subjects
 - (vii) Chap. 35 - Circadian Rhythms in Fatigue, Alertness, and Performance
 - (viii) Chap. 40 - Drugs That Disturb Sleep and Wakefulness
 - (ix) Chap. 48 - Approach to the Patient with Disordered Sleep
 - (x) Chap. 49 - Cardinal Manifestations of Sleep Disorders
 - (xi) Chap. 50 - Use of Clinical Tools and Tests in Sleep Medicine
 - (xii) Chap. 51 - Classification of Sleep Disorders
 - (xiii) Chap. 55 – Sleep Disruption in Jet Lag and Other Circadian Rhythm-Related Disorders
 - (xiv) Chap. 59 – Overview of Insomnia: Definitions, Epidemiology, Differential Diagnosis, and Assessment
 - (xv) Chap. 65 – Narcolepsy: Diagnosis and Management
 - (xvi) Chap. 70 - Restless Legs Syndrome & Periodic Limb Movements during Sleep
 - (xvii) Chap. 81 – Central Sleep Apnea
 - (xviii) Chap. 83 - Snoring & Upper Airway Resistance
 - (xix) Chap. 86 - Sleep Apnea & Metabolic Dysfunction
 - (xx) Chap. 87 - Clinical Features and Evaluation of Obstructive Sleep Apnea – Hypopnea – Syndrome and the Upper Airway Resistance-Syndrome
 - (xxi) Chap. 88 - Medical Therapy for Obstructive Sleep Apnea-Hypopnea Syndrome
 - (xxii) Chap. 89 - Continuous Positive Airway Pressure Treatment for Obstructive Sleep Apnea-Hypopnea Syndrome
 - (xxiii) Chap. 92 - Management of Obstructive Sleep Apnea - Hypopnea Syndrome: Overview
 - (xxiv) Chap. 95 - Noninvasive Ventilation for Chronic Respiratory Failure
 - (xxv) Chap. 96 - Sleep & Cardiovascular Disease: Present & Future
 - (xxvi) Chap. 97 - Sleep-Related Cardiac Risk
 - (xxvii) Chap. 98 - Cardiac Arrhythmogenesis during Sleep: Mechanisms, Diagnosis, and Therapy
 - (xxviii) Chap. 100 - Systemic and Pulmonary Hypertension in Obstructive Sleep Apnea
 - (xxix) Chap. 102 - Heart Failure
 - (xxx) Chap. 99 – Cardiovascular Effects of Sleep-Related Breathing Disorders

- (xxxix) Chap. 116 - Monitoring and Staging Human Sleep
- (xxxii) Chap. 117 - Monitoring Techniques for Evaluating Suspected Sleep-Disordered Breathing
- (xxxiii) Chap. 120 - Evaluating Sleepiness

VII) Lectures for Sleep Medicine Orientation Month for Pulmonary Fellows

- 1) Approach to the Patient with Disordered Sleep; Chap. 48, 49*
- 2) Differential Diagnosis of Hypersomnolence***
- 3) Differential Diagnosis of Insomnia; Chap. 59*
- 4) Polysomnography Scoring Rules and Recognition **
- 5) Clinical Tools and Tests in Sleep Medicine; Chap. 50*
- 6) Drugs that Disturb Sleep and Wakefulness; Chap.40*
- 7) Positive Airway Devices & Therapeutic Intervention for Sleep Apnea; Chaps 87, 88 & 89*
- 8) Hypoventilation syndromes
 - (a) Casey KR, Cantillo KO, Brown LK, Sleep Related Hypoventilation/Hypoxemic syndromes. CHEST 2007, 131(6);1936-48
 - (b) Mokhlesi B, Tulaimat A. Recent Advances in Obesity hypoventilation Syndrome. CHEST 2007; 132(4);1322-36.
- 9) Narcolepsy Syndrome; Chap. 65*
- 10) Circadian Rhythms and Sleep Disruption; see review article reference below*****
- 11) Restless Leg Syndrome & Periodic Limb Movement Disorders; Chap. 70*
- 12) Central Sleep Apnea; Chap. 81*(to Dr. Summers)

* Kryger MH, Roth T, Dement WC: Principles and Practice of Sleep Medicine: 4th Ed., Elsevier Saunders Co., Phil., PA 2005

** The AASM Manual for the Scoring of Sleep and Associated Events: Rules, Terminology and Technical Specification

*** International Classification of Sleep Disorders: Diagnostic and Coding Manual, 2nd Ed. American Academy of Sleep Medicine 2005

***** Lu BS, Zee, PC. Circadian Rhythm Sleep Disorders. Chest 2006;130:1915-23.