

# University of Missouri-Columbia

## Sleep Medicine Fellowship Program Manual



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## **SLEEP MEDICINE FELLOWSHIP MANUAL**

### **MU SLEEP DISORDERS CENTER & SLEEP MEDICINE PROGRAM**

#### **Program Director's Note of Welcome**

Welcome to the Sleep Medicine Fellowship program at the University of Missouri Health Sciences Center and HST VA Medical Center. You are joining a program of excellence in patient care, education and clinical research. We are extremely proud of our faculty, our fellows, our staff, our educational programs as well as our medical facilities.

As you start your training, you will see the emphasis on four key ingredients.

- 1). We expect excellence in clinical care for our patients.
- 2).We will deliver this care with integrity, caring, compassion, and respect for the patients, families and for all others.
- 3).Excellence in clinical care will be accompanied by excellence in education – in learning and teaching.
- 4).You will be expected to keep up with current research and literature in Sleep Medicine and will have opportunities to participate in research.

The teaching program is primarily dedicated to developing comprehensive understanding of the field of Sleep Medicine. Your rotations will comprise of activities as recommended and approved by the ACGME and American Board of Sleep Medicine. The mission of the training is to provide excellence in education to our fellows so that they become superb, competent and confident physicians. In our endeavor to continually improve the program, your feedback is needed and will be kept confidential. Just as faculty and staff will evaluate you, you will evaluate staff and faculty. You will also be evaluated by the patients.

You will have access to the educational material needed to complete your tasks and achieve your goals. You will be an important part of the Sleep Medicine program family. As such, you will always be welcome to discuss any issues of concern with the faculty or with director of the program. Your learning will also include help in educating other residents (rotating residents and fellows), technologists, medical students, nurses and health care professionals. We are a team and we shall all work together to provide the best care to our patients and best educational opportunities for our trainees at all levels.

In summary, we are committed to providing you the environment, the opportunity, to help you excel in the field of Sleep Medicine and to develop into caring, compassionate, superb physicians. We are here to help you in any way that we possibly can.

I wish you the very best.

Pradeep Sahota  
**Pradeep Sahota M.D., F.A.A.N., F.A.A.S.M., F.A.E.S.**  
**Professor & Chairman, Dept. of Neurology**  
**Director, Sleep Medicine Fellowship Program**

## **Mission of the Sleep Medicine Program**

The primary mission of the program is:  
“Excellence in patient care, education and research”.

In keeping with the overall vision and mission of the University of Missouri Health Sciences Centers, the Sleep medicine program will:

- 1. Provide excellent clinical care to our patients with a variety of sleep disorders, as well as demonstrate care and respect for their families.**
- 2. Provide excellent education to our trainees, to our medical students, to rotating residents, to other health care personnel, and to the Missouri population and society in general.**
- 3. Continue the ongoing clinical research and find collaborative opportunities for sleep medicine research.**
- 4. With support from UMHC, seek to expand sleep medicine academic activities at the University of Missouri to provide greater opportunities for our trainees as well as our patients.**

All clinicians, trainees, and staff, are responsible for maintaining this standard of excellence by providing patient centered services on an inpatient, outpatient and consultative basis.

**Remember: Our patients come first.**

**We should treat our patients as we would like our own family to be treated here.**

**Please respect your patients and their families.**

**We are grateful that we have the opportunity to serve them.**

## **FACULTY**

The Sleep Medicine program consists of four core faculty members, & several key faculty members with expertise in Sleep Medicine - four are board certified in Sleep medicine. Areas of expertise/interest include neurology, pulmonary medicine, cardiology, psychosomatic medicine & psychology, child health, and otolaryngology. There are several physicians with joint appointments/educational activities in the program. Also, a faculty member with expertise in basic science of Sleep Medicine is currently involved in research in this area. In addition, faculty members from other departments such as internal medicine, family and community medicine, anesthesia, physical medicine and rehabilitation are available for consultation and interaction with Sleep Medicine team.

## **FACULTY**

**P. Sahota** MD, FAAN, FAASM, FAES. Professor & Chair, Department of Neurology; Director, Sleep Medicine Fellowship Program; Office Phone: 573-882-3135

**M. Sivaraman** MD, FAASM, Associate Professor, Neurology & Sleep Medicine; Associate Director, MU sleep Disorders Center; Office Phone: 573-882-3133

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**A. Muzaffar** MD, Associate Professor, Plastic Surgery

**J. Slaughter** MD, Associate Professor, Psychosomatic Medicine & Neurology Office Phone: 573-882-3133

**H. Sohal** MD, Assistant Professor, Pulmonary, Critical Care & Environmental Medicine

**D. Folzenlogen** MD, Associate Professor, Rheumatology

**J. Marshall** MD, Professor, Gastroenterology

**S. Lucchese** MD, Assistant Professor, Neurology

### **Non-Physician Faculty**

**M. Thakkar** Ph.D, Associate Professor & Director, Research; Office 573-814-6000

**E Hart** PhD, Associate Professor, Dept. of Psychology

### **ADMINISTRATIVE STAFF**

**P. McQueen**, Fellowship Coordinator, Sleep Medicine program; Phone 573-882-8668

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**B. March**, Executive Assistant to Chairman/Director of Fellowship Program; 882-3135

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### **SLEEP DISORDER CENTER STAFF**

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## **NEUROLOGY CLINIC STAFF**

T. Bratton  
C. Lackland, RN  
R. Lachhman, LPN  
C. Martin  
G. Halley, PSR  
C. Kimbrel  
J. Richards, PSR  
L. Burnette  
S. Hartsell, LPN  
T. Kimbrough  
W. Specker, LPN  
R. Campbell, LPN

## **CURRENT FELLOW**

Alethia S. Lim, MD

## **FACULTY QUALIFICATIONS AND RESPONSIBILITIES**

The Program Director and faculty are responsible for the administration of our program. The Faculty participates in fellow recruitment and selection, instruction, supervision, counseling, evaluations, and advancement.

### **Program Director**

Pradeep Sahota, MD, FAAN, FAASM, FAES, is Professor and Chairman of Neurology & Director of Sleep Medicine Program. Dr. Sahota is Board certified in:

1. Neurology;
2. Neurology With additional competence in Clinical Neurophysiology;
3. By American Board of Sleep Medicine (previous ABSM & new ABMS granted board);
4. Certified by American Board of Clinical Neurophysiology (ABCN Inc.).

He has over twenty five years of experience in Sleep Medicine and academic neurology. He has won several awards for excellence in teaching. He has served on various institutional, state, national, and international committees. He has served as a site reviewer for the Accreditation of Sleep Centers. He has served on the Accreditation Committee of the United Council for Neurological Subspecialties (UCNS) & chaired the Program Accreditation & Development subcommittee (PADS) of American Academy of Neurology (AAN) and served on Education Committee of the AAN .He has served as Chair of Sleep Research Group of World Federation of Neurology (WFN).

### **Program Director Responsibilities**

The program director oversees and organizes the activities of the educational program.

1. The responsibilities include devotion of sufficient time to provide leadership to the program and supervision of the fellows. As examples of direct involvement, the program director, Chairs the weekly (Wednesday pm) Sleep Grand Rounds/ Journal club/ multi- D conference/ research conference (once a week), meets with the fellow regularly to discuss

issues/concerns, educational sessions in SDC and Outpatient Sleep clinics setting. He is responsible for monitoring the content and quality of our Program.

2. The Program Director and other faculty have set forth the educational goals and objectives for training. The required knowledge, skills and attributes are clearly outlined. These are consistent with overall goals and objectives of the program.
3. The Program Director is responsible for overall supervision of the teaching staff, fellow, and other program personnel. Supervisory lines of responsibility regarding patient care are clear. Every patient seen as inpatient, outpatient or consultation, is discussed with a supervising physician. Every sleep test is reviewed with a supervising sleep physician.
4. The Program Director, in consultation with other faculty, is responsible for regular evaluation of fellow's knowledge, skill, and performance. These evaluations are performed after each monthly rotation and the program director meets with each fellow at least semi-annually to discuss their performance. If due concern arises, more frequent evaluations may be needed. Evaluations are communicated to the fellow in a timely manner with formal written evaluations at least twice a year. Fellows are encouraged to review their evaluations. The Program director reviews the evidence of satisfactory progress for the year of training. The evaluations are based on Sleep Medicine core competencies. At the completion of the program, a final written evaluation is performed.
5. The Sleep Medicine program follows the Institution's Policy for implementation of their procedures for academic discipline, fellow complaints, and grievances. All fellow issues are brought to the attention of the Program Director. If, however, the complaint deals directly with the Program Director, then it is directed to the Associate Dean for Graduate Medical Education.
6. Program Director ensures that if there is mental or emotional stress or other factors that might relate to the resident's performance, then these are monitored and recommendations made as needed. In this regard, a presentation on sleep and effect of sleep deprivation on performance has been made to our physicians.
7. Program director keeps accurate statistical and narrative description of the program. All clinical activities are clearly listed. There is a description of goals and objectives and performance review by the supervisor. On a regular basis the program director will review the patient mix being seen by the fellow. The program director is responsible to the Executive Director of the RRC to inform them of any change in program Directorship or department leadership. The program director is responsible for preparing an accurate statistical and narrative description of the program as well as updating annually both program and fellow records through the ACGME's Accreditation Data System.  
The program director will seek prior approval of the RRC for any changes in the program that may significantly alter the educational experience of the fellows.  
Such changes, for example, include:
  - (1) Addition or deletion of a participating institution;
  - (2) Change in the format of the educational program;
  - (3) Change in the approved fellow complement for those specialties that approve fellow-complement.
8. Program Director is responsible for financial and administrative support of the program.

## **Teaching Staff and Responsibilities**

There is a sufficient number of faculty members with documented qualifications to instruct and supervise the fellow and other trainees in the program. Sleep medicine is a multi-disciplinary in its scope and as such the faculty members include physicians with credentials and certification in many specialties – including Neurology, Internal Medicine, Pulmonary Medicine, Psychiatry, Pediatrics, Family Medicine and Otolaryngology. The faculty also includes non-physicians with expertise in Basic Neuroscience of Sleep Medicine. There is multidisciplinary cooperation in educating the fellow – clinical and didactic education. Dr. Johnson is responsible for the programmatic supervision for the VA rotation component. Additional details of responsibilities of each faculty member are listed in the core competency based curriculum. In addition, faculty members from other departments such as internal medicine, family and community medicine, anesthesia, physical medicine and rehabilitation are available for consultation and interaction with Sleep Medicine team.

The faculty members devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities. They have strong interest in the education of fellows, and support the goals and objectives of the Sleep medicine educational. The teaching staff members meet on a monthly basis for faculty meeting to review academic and departmental issues. The core faculty members also meet 1-2 times per year to review program related issues. Faculty members meet every 3-4 months to do a quality assurance and quality improvement. Fellow participated in all clinical, educational and quality improvement meetings.

### **Examples of Participation of faculty in clinical activities, supervision and education:**

#### **Clinical activities (see rotation chart-Appendix A):**

1. Sleep study review (daily) – Drs. Sahota, Sivaraman, & Goyal.
2. Outpatient clinic – Drs. Sivaraman, Sahota, Patel, Ner, Goyal, Johnson, Muzaffar & Hemme.

#### **Academic activities/ education**

1. Wednesday morning (M Goyal)
2. Wednesday pm-Sleep Grand Rounds – Journal club, research conference, core curricular conference, Multi-D/case conference
3. Daily case review and discussion (faculty member assigned to Sleep studies review)
4. Friday teaching session (M Sivaraman)
5. Presentations at other settings including Neurology Grand Rounds

#### **Research/ Scholarship**

The faculty members participate in research and scholarship at different levels -

- a) *Discovery* (peer-reviewed funding or publication of original research in a peer-reviewed journal);
- b) *Dissemination* (as evidenced by review articles or chapters in textbooks);
- c) *Application* (as evidenced by the publication or presentation of, for example, case reports Or clinical series at local, regional, or national -professional and scientific society meetings).

The fellow has the opportunity to participate in some of these endeavors. Guidance and technical support is provided regarding different aspects of research including - research design and statistical analysis.

#### **Other program personnel**

Other personnel include a Fellowship Coordinator, and Department Administrator, ITS/Computer support, and clerical staff to support the administration and conduct of the program.

## **FACILITIES AND RESOURCES**

The program has access to patient resources and has excellent facilities.

### **Patient Resources/ Population**

The Program Director is responsible for ensuring that a sufficient number of patients are available to the fellow for educational purposes. In addition to numbers, a diverse patient population pertains to patients of different age, sex, and various types of Sleep problems, seen both in inpatient, and outpatient settings with regular record review with the attending physicians. This is accomplished by clinical rotations through University Hospitals & Clinics – including Adult and pediatric clinics.

The experiences include longitudinal management of patients with the fellow acting under the supervision of a faculty member. The patient population includes patients with the major categories of sleep disorders, including:

- a) Sleep apnea and other sleep-related breathing disorders;
- b) Parasomnias;
- c) Circadian rhythm disorders;
- d) Insomnia;
- e) Narcolepsy and related excessive daytime sleepiness disorders; and
- f) Sleep Disorders in Children
- g) Sleep problems related to other factors and diseases such as medications, and psychiatric and medical disorders.

### **B. General Facilities**

The Sleep Medicine fellowship program at the University of Missouri Health Sciences Center is supported by modern facilities.

The Sleep Disorders Center is housed in a modern facility on the 2<sup>nd</sup> floor of the new tower. The Center is appropriately equipped, for 6 fully-equipped polysomnography bedrooms and support space and has equipment for use for both adults and children. It is fully accredited by The American Academy of Sleep Medicine.

The fellow has space in reading room in Sleep Disorders Center. The fellow also has a shared office space in department. There are two computers and a printer in the room. The computers have on-line access to patient data, MEDLINE, Medical School library, Internet, and all on-line educational resources. Several key textbooks and educational materials are also kept in this area.

We have a conference room with adequate space to carry out our educational activities. The main conference room contains a computer with audio, video, and CD ROM connections. A writing board as well as a retractable screen for PowerPoint or video presentation is also available in this conference room. Each faculty member has their own office. In addition, there is billing area and area for support staff.

In addition, there are clinic facilities at HST VA Hospital and a basic sleep research lab space assigned to Dr Thakkar – currently at the HST VA Hospital.

## **MU Facilities:**

### **Inpatient**

Sleep Medicine program does not have a dedicated inpatient service. However, inpatient consults are seen as needed and consultation regarding sleep studies (yes or no; what type) are provided to other services.

### **Outpatient**

The Adult Sleep Disorders Clinic is housed on the third floor of the University Physician Medical Building (UPMB). A small conference room with a white-board is available in the Clinic. Several computers are available in this area, for direct access to patient data, MEDLINE, Medical Sciences Library, Internet, and all on-line educational resources. Electronic medical records, radiology records, and results of diagnostic tests are readily available at each site. ENT clinic is also housed on 3<sup>rd</sup> floor of UPMB building. Cleft lip/cleft palate clinic is also housed on the first floor of the main hospital and the Pediatric clinic is in women's and children's hospital.

### **Food Facilities**

Food is available to all trainees in the University Hospital Cafeteria located on ground floor of the University Hospital. We also have a physician lounge that provides food facilities on 24-hour a day. To access you must swipe your name badge.

### **Call Room Facilities**

The fellows do not take in house call.

## **Harry S. Truman Veteran's Administration Hospital:**

### **Outpatient**

The Sleep Disorders Clinic and the Psychosomatic Clinic are housed in the VA facility. The physician area has a code lock system so that the fellow can keep their belongings in that area while they attend clinic. The fellows do not perform inpatient services at the VA.

### **Food Facilities**

VA Cafeteria

### **Call Room Facilities**

The fellows do not take in house call.

### **Medical Records Facility & responsibilities**

In addition to the Medical Records Department in the University Hospital, medical records for patients seen or studied in the center are also kept in the Sleep Disorders Center. The University Hospital is now using electronic medical records. HST VA hospital is also using EMR. Training for the computerized systems is included in the new physician orientation. Thus, most recent information is available on computerized medical records.

Chart completion is emphasized by the fellows as well as by the attending physicians. Any chart in completion extending beyond 21 days is reported to the Director of the Program. The fellow is immediately informed and expected to take care of the deficiencies. Excessive and extensive

delinquencies beyond 30 days may lead to disciplinary action such as temporary suspension until the delinquencies are rectified.

### **Medical Sciences Libraries**

The Medical Sciences Library is staffed by qualified medical librarians and is located in the northwestern part of the Health Sciences Center on the second floor. Apart from possessing a large number of texts and journals and electronic resources, the library offers an interlibrary loan system as well as access to MEDLINE, E-Journals, UpToDate, Ovid Web, and other databases. Other services available include reference, circulation, reserve reading, database researching, current awareness service, citation verification, tours and bibliographic and classroom instruction. It is open during the fall and winter semester the following hours:

Saturday	9 a.m. – 6 p.m.
Monday – Thursday	8 a.m. – 11 p.m.
Friday	8 a.m. – 6 p.m.
Sunday	2 p.m. – 11 p.m.

Notably, direct online access to medical school library and to MEDLINE and all online educational services is available through any computer terminal including the ones in the fellow's office, the computers in the faculty offices, as well as the computers on the inpatient floors and outpatient clinics. For online visit or additional information regarding the library, please go to <http://library.muhealth.org/>.

There is a library at the HST VA hospital as well.

In addition, several key texts and journals in Sleep Medicine are also maintained in the Sleep Disorders Center and in the department conference room.

## **Sleep Medicine Program Curriculum (Table of Contents)**

1. Introduction
2. Program Goals
3. Curricular content - Specific areas covered
4. Core competency based educational objectives for the program.
5. Goals and core competency based objectives of each component of fellowship
6. Summary of core competency teaching and evaluation methods
7. Education methods and core competencies covered
8. Assessment Methods
9. Supervision of fellow patient care activities
10. Progressive Responsibility
11. Longitudinal care and education
12. Rotation Format
13. Educational Activities
14. Details of Curricular Sessions
15. Educational Policies

### **CURRICULUM**

#### **1. INTRODUCTION**

The Sleep Medicine Fellowship program has designed a curriculum to provide the fellow with both excellent educational and clinical experience and exposure to research.

The curriculum includes:

Program Goal

Specific areas covered in curriculum

Objectives

Core competency based educational program

Narrative of each clinical and educational experience with core competencies covered

Educational methods

Assessment methods

Level of supervision

#### **2. PROGRAM GOAL:**

The goal of our program is to teach the fellows to be competent, inquisitive, knowledgeable, caring, and compassionate sleep medicine physicians with excellent interpersonal and communication skills.

Achieving that goal involves presenting the fellows with a broad fund of medical knowledge in sleep medicine with emphasis on core competencies in order for the fellow to provide rational, comprehensive and cost effective patient-centered care. Fellows will be able to analyze and learn from their own practice, understand the health care systems, develop excellent interpersonal and communication skills, and display irreproachable professionalism.

A well-defined core curriculum has been developed with a focus on the six core competencies for each component of the program. Educational experiences are used to teach the core competencies as the

competencies relate to each area. The teaching methods consist of didactic sessions on core curricular topics, case discussions, multi-disciplinary presentations, and journal clubs. In addition, monthly Grand Rounds sessions are dedicated to research. The clinical teaching is done in the outpatient setting, and Sleep Disorders Center and the Veterans Administration Hospital, and in the inpatient setting at MU.

Fellow's evaluation is based on the six competencies.

### **3. CURRICULAR CONTENT – SPECIFIC AREAS COVERED:**

The core curriculum will cover the following specific areas:

#### **A. BASIC NEUROSCIENCE OF SLEEP MEDICINE**

##### **1. Anatomy of Sleep**

- Anatomy of hypothalamus –endocrine and autonomic components
- Anatomy of brainstem and reticular activating system
- Anatomy of upper airway

##### **2. Physiology and Pathophysiology of Sleep**

- Neurophysiology of sleep, membrane potentials, and post synaptic potentials
- Neurologic, chronobiologic, cardiovascular, pulmonary, endocrine, and gastrointestinal physiology and pathophysiology factors in the sleep process

#### **B. CLINICAL ASPECTS OF SLEEP MEDICINE**

##### **3. Normal Sleep in Adults and in Children**

- Ontogeny of sleep
- Sleep and aging

##### **4. Sleep Deprivation and Consequences**

##### **5. Classification of Sleep Disorders – ICSD, DSM**

##### **6. Evaluation of Patients with Sleep Disorders**

- Obtaining an orderly, detailed history from the patient as well as a thorough medical and neurological evaluation
- Organizing, presenting and recording data.
- Participation in evaluation and decision making for patients with sleep disorders,
- Discussion with patient and family

##### **7. Insomnias**

- Types – acute, psychophysiological, paradoxical, idiopathic
- Due to medical, neurological or mental disorder
- Drug or substance related, poor sleep hygiene
- Diagnosis of insomnia, evaluation and management

##### **8. Hypersomnias**

- Narcolepsy/cataplexy – spectrum of disorders
- Other hypersomnias- due to medical condition, Long Sleeper Syndrome
- Drug or substance related, insufficient sleep syndrome, idiopathic
- Recurrent hypersomnia – Kleine Levin Syndrome

- Diagnosis, evaluation and management

## **9. Sleep Apnea**

- Anatomy and physiology of upper airway
- Different types of apnea – obstructive, central, mixed
- Presentation, diagnosis of sleep apnea and sleep related hypoventilation/hypoxemia
- Diagnosis, evaluation and management

## **10. Disorders of Circadian Rhythm**

- Types – delayed sleep phase syndrome, advanced sleep phase disorder
- Irregular Sleep-wake, Non-entrained, free running sleep pattern
- Shift work disorder, jet lag, due to medical condition or drug or substance use
- Diagnosis, evaluation and management

## **11. Sleep Related Movements and Movement Disorders**

- Hypnic jerks
- RLS and periodic limb movements in sleep
- Cramps, bruxism, fragmentary myoclonus, benign sleep myoclonus of infancy
- Propriospinal myoclonus at sleep onset, other movement disorders
- Hypnagogic foot tremor and alternating leg muscle activation during sleep
- Diagnosis, evaluation and management

## **12. Parasomnias**

- Disorders of arousal –confusional arousal, sleep walking, sleep terrors
- REM related - REM behavior disorder, sleep paralysis, night mares
- Nocturnal enuresis, eating disorder, other parasomnias
- Diagnosis, evaluation and management

## **13. Sleep and Medical Disorders**

- Pulmonary disorders -asthma, obesity – hypoventilation, other
- Sleep and cardiology - CHF, ischemic heart disease, cardiac arrhythmias
- Sleep and rheumatologic disorders - fibromyalgia, arthritis and sleep
- Chronic painful conditions and sleep (EDF vs. EDS)
- Sleep and gastro-intestinal disorders
- Gastro-esophageal reflux, sleep related abnormal swallowing and choking
- Diagnosis, evaluation and management with focus on sleep

## **14. Sleep and Neurological Disorders**

- Sleep related headaches, sleep related epilepsy
- Fatal familial insomnia, neuro-degenerative conditions (e.g. Alzheimer's disease)
- Parkinson's disease and other movement disorders
- Diagnosis, evaluation and management with focus on sleep

## **15. Sleep and Psychiatric/Psychological Disorders**

- Sleep and mood disorders –specially insomnia, sleep and anxiety disorders
- Sleep and somatoform disorders, sleep and psychotic disorders
- Sleep and personality disorders
- Diagnosis, evaluation and management includes pharmacological and behavioral

## **16. Sleep and Otolaryngology**

- Snoring, upper airway conditions and sleep
- Adenoids, tonsils, deviated septum, turbinate hypertrophy, nasal polyps  
large uvula, micrognathia, retrognathia
- Sleep related laryngospasm
- Evaluation and management - uvulopalatopharyngoplasty and other surgical options

## **17. Sleep Disorders in Women**

- Menstrual-related sleep disorders, sleep during pregnancy
- Pregnancy related sleep disorders, menopause and sleep
- Diagnosis, evaluation and management with focus on sleep

## **18. Sleep Disorders in Children**

- Insomnia, hypersomnia, disorders of circadian rhythm, parasomnias, Sudden Infant Death Syndrome
- Evaluation and management of sleep disorders in children

## **19. Sleep and Environment**

- Economic, ethnic, social, familial factors
- Noise, temperature, altitude, other

## **20. Sleep in Special Circumstances**

- Sleep and hospitalization, sleep in mentally retarded, sleep and autism
- Diagnosis, evaluation and management with focus on sleep

## **21. Sleep Tests**

- Methods (including montages), technical issues (including electrode application, artifacts)
- Indications, usefulness and limitations of sleep diagnostic tests: PSG – baseline CPAP/ BIPAP/ oxygen therapy, MSLT, MWT, PFT, actigraphy, attended vs. portable monitoring –pros and cons
- Psychological and psychometric testing, TSH, HLA typing, serum ferritin,
- Radiological testing—upper airway imaging, CT/MR—head scan

## **22. Pharmacology of Sleep**

- Mechanism of action of drugs for insomnia, benzodiazepines and sleep
- Mechanism of action of drugs for hypersomnolence and cataplexy
- Mechanism of action of decongestants, anti-allergy medications and anti-histamines
- Mechanism of action of widely used psychiatric drugs
- Medication effects (other medications) on sleep
- Melatonin and sleep
- Pain medications and sleep
- Alcohol and sleep
- Barbiturates and sleep

## **23. Sleep Center Functioning**

- Sleep Center team, technologists and support staff, administration,
- Sleep related questionnaires
- Health systems and sleep – finances, regulations, medicare, Medicaid, insurance etc.

**24. Documentation**

- Formulation and documentation of sleep consultation, sleep test,
- Letter to physician, and other health care agencies

**25. Education**

- Teaching patients, families, residents, students, rotating fellow, technologists, health care personnel and others

**26. Quality Improvement**

- Learn the aspects of quality improvement
- Participate in Quality Improvement meetings

**27. Medical Ethics and Legal Aspects of Sleep Medicine**

- Medical ethics and sleep
- Impact of shift work and work hours
- Driving: Sleep related accidents and prevention

**28. Statistics and Research Methods**

- Statistical methods
- Epidemiology
- Case studies- with application of statistical methods
- Review of sleep literature
- Clinical and/basic science research

**29. Acute Resuscitation Methods – BLS/CPR/ACLS****4. CORE COMPETENCY BASED EDUCATIONAL OBJECTIVES FOR THE PROGRAM:**

This section documents the six core competencies and their application to Sleep Medicine education. Presentations have been made to the faculty members and trainees to help understand the concept of core competencies. Based on them, the Sleep Medicine Program curriculum is as follows. Our training program has a 12-month curriculum. The training is based on supervised clinical work with increasing responsibility for outpatient and inpatient care. There is also simultaneous instruction in basic and clinical Sleep Medicine. The core competencies have been integrated into the curriculum with defined teaching and evaluation methods. The fellows are required to obtain competency in the following six (6) core areas as they apply to general neurology and sub-specialty areas. The following is a summary of the goals and objectives for acquiring skills in core competencies.

## **A. Patient care**

This competency involves skills of data gathering with the ability to perform a comprehensive history and examination, create a differential diagnosis, evaluate, and recommend cost effective management based on appropriate use of diagnostic tests and interpretation. Gather data; order diagnostic tests; interpret data; make decisions; perform procedures; manage patient therapies; work with others to provide patient focused care

Sleep Medicine specific patient care core competencies include:

- Obtaining a complete sleep history, and performing a thorough physical and neurological examination
- Determining if the symptoms are a result of primary or secondary sleep disorder
- Diagnosis and develop differential diagnosis
- Based on clinical evaluation, recommend appropriate tests e.g. polysomnographic sleep studies, MSLTs, and others
- Understand application and relevance of testing and test results
- Based on comprehensive assessment, recognize and treat sleep disorders
- Document a sleep consultation
- Discussion with patient and family, education

### **Teaching Methods:**

- Bedside clinical teaching (in outpatient and inpatient setting) where faculty act as role models and fellows learn and adapt some of the faculty behaviors and skills
- Daily case review sessions and sleep studies review
- Education on how to write a sleep consult and a sleep study report
- Didactic sessions/core curricular sessions, journal club, multi-disciplinary or case conferences
- Review of practice parameters
- Computer modules, programs, and instructional videos available
- Quality Assurance/Quality Improvement (QA/QI) meetings
- Attendance in educational meetings – APSS, Grand rounds

### **Evaluation Methods:**

- Direct observation in the clinical setting
- Review of clinical notes, sleep study reports and patient care documentation
- Mentor evaluation
- Written evaluation by faculty and formal review with program director with written evaluation
- 360 evaluation
- Chart review
- Presentation at journal club, multi-disciplinary or case conferences, Grand Rounds
- Performance on the sleep board examination

## **B. Medical Knowledge:**

Medical knowledge applies to the overall fund of knowledge regarding sleep - epidemiology, etiology, diagnostic criteria, treatment strategies, course and prognosis, ability to reference and utilize electronic information, and to apply current research to patient care.

Sleep Medicine specific medical knowledge core competencies include:

- Basic mechanisms of sleep – anatomy, physiology and pathophysiology
- Comprehensive knowledge of normal sleep and sleep disorders in adults and children, e.g., insomnias, hypersomnias, parasomnias, disorders of circadian rhythm, and medical, neurological, psychiatric disorders and relation to sleep
- Principles of epidemiology, research, statistical methods and application to sleep medicine
- Developing and reaching a correct diagnosis, differential diagnosis, and determining the most appropriate testing for sleep disorders, e.g., PSG, MSLT, other tests
- Comprehensive knowledge of pharmacological and non-pharmacological management of sleep disorders, e.g., behavioral and cognitive therapies, sleep hygiene.
- Recognizing the risks and benefits, and cost effective approach to treatment options of sleep disorders (surgical vs. medical vs. other)

## **Teaching Methods:**

- Bedside clinical teaching in outpatient and inpatient settings
- Daily case review sessions and sleep studies review
- Didactic sessions-core curricular, journal club, multi-disciplinary/case conferences, research conferences
- Didactic sessions on critical appraisal of literature and understanding statistics
- Review of practice parameters
- Computer modules, programs and instructional videos are also available for checkout.
- QA/QI meetings
- Attendance in educational meetings – APSS, Grand Rounds

## **Evaluation Methods:**

- Direct observation in the clinical setting
- Presentation at journal club, multi- disciplinary or case conference, Grand Rounds
- Mentor evaluation
- Written evaluation by faculty and formal review with program director including written evaluation
- 360 evaluation
- Patient surveys
- MSLT scoring by fellow – cross checked by attending
- PSG scoring and comparison with technologist scoring
- Chart review
- Performance on the sleep board examination

### **C. Practice-Based Learning and Improvement:**

This competency involves Analysis of practice performance and carrying out needed improvements; locate and apply scientific evidence to the care of patients; critically appraise the scientific literature; use the computer to support learning and patient care; facilitate the learning of other health care professionals and demonstration of the ability to access information from print and online sources, e.g., Medline, Google, PubMed.

Sleep medicine specific practice based learning and improvement core competencies include:

- Recognizing limitations in knowledge of sleep and sleep disorders based on faculty input, patient evaluations and sleep studies, case reviews, presentations, journal clubs and self appreciation.
- Improvements in knowledge of sleep medicine with literature review and continuous learning of evidence based sleep medicine by accessing print and online resources

#### **Teaching Methods:**

- Bedside clinical evaluations and teaching
- Daily case review sessions and sleep studies review
- Review of practice parameters
- Didactic sessions - core curricular conferences, journal club, multi-disciplinary or case conferences
- Education of issues of patient care from different perspectives (medical, psychological, psychiatric)
- Identify areas for improvements based on the individual case and over a period of time
- Computer modules, programs and instructional videos are also available for checkout
- QA/QI meetings
- Attendance in educational meetings – APSS, Grand Rounds
- Journal club review and fellow presentations.
- Didactic sessions on critical appraisal of literature and understanding statistics

#### **Evaluation Methods:**

- Direct observation in the clinical setting
- Evaluation of the patient care documentation- review of clinical notes, sleep study reports
- Presentations at journal club, multi- disciplinary or case conferences, grand rounds
- Mentor evaluation
- Written evaluation by faculty - documents concerns and improvements
- Formal review with program director including written evaluation
- 360 evaluation, patient surveys
- MSLT scoring by fellow – reviewed by attending
- Comparison of PSG scoring with technologist
- Chart review

## **D. Interpersonal and Communication Skills**

This core competency involves the development of a therapeutic relationship with patients, families and other members of the health-care team, listening skills, and the art of communication - both verbal and non-verbal- with patients of diverse ethnic, educational, gender and racial backgrounds.

Sleep Medicine specific interpersonal and communication skills core competencies include:

- Sound therapeutic relationships with patient, family and other members of health care team
- Sensitive and effective communication. Sleep disorders can occur in patients of diverse ethnic and social backgrounds. Some patients may have psychological or psychiatric illness.
- Superior listening skills and understanding of the patient situation – sleep histories can be extensive but it is important to obtain the detailed information
- Collaborating with other health care personnel, e.g., regarding medical/ psychological/ behavioral issues
- Participating in education of patients, families, other health care professionals regarding sleep disorders.
- Obtaining, interpreting and evaluating consultations from other medical specialties.
- Effective consultation to other medical specialties with clear communication and recommendations,
- Working effectively with a multi-disciplinary team, e.g., technologists/ RTs/social services/nursing etc.
- Get consent/patient input when discussing evaluations, tests and treatment choices: Sleep tests and treatments can be expensive. All management decisions should be made with participation of the patient.

### **Teaching Methods:**

- Clinical teaching and clinical experiences - role-modeling system is invaluable in this regard
- Daily case review sessions and sleep studies review
- Didactic sessions - core curricular conferences, journal club, multi-disciplinary or case conferences
- Computer modules, programs and instructional videos are also available for checkout.
- QA/QI meetings
- Attendance in educational meetings – APSS, Grand Rounds

### **Evaluation Methods:**

- Direct observation in the clinical setting
- Evaluation of the patient care documentation
- Presentation at journal club, multi- disciplinary or case conference, Grand Rounds
- Mentor evaluation
- Written evaluation by faculty and formal review with program director including a written evaluation
- 360 evaluation and patient surveys
- Chart review

## **E. Professionalism**

This competency is the display of honesty, integrity, sensitivity to patient's ethnicity, age and disabilities, responsibility and patient advocacy with timely communication and professional and ethical behavior

Sleep Medicine specific professionalism core competencies include:

- Providing timely communication to patients and health care professionals
- Appropriate documentation of clinical evaluation and sleep studies
- Coordinating care with other medical teams to provide continuity of care, e.g., patients with other medical issues referred by physicians (in/out of town). Provide timely and useful information to other members of the health care team.
- Exhibiting ethical, professional behavior with honesty, integrity, compassion and respect for patient confidentiality
- Respect for patients and colleagues as individuals without consideration for age, culture, disability, ethnicity, gender, socioeconomic background, religious beliefs, and sexual orientations. Sleep patients may have multiple issues of concern – respect their views and address their problem whatever the etiology may be – medical/psychological/ psychiatric or other.
- Exhibit high professional conduct.
- Admit mistakes or professional errors – in evaluation, test interpretation or other care

### **Teaching Methods:**

- Clinical teaching and clinical experiences (role-modeling system is invaluable in this regard)
- Daily case review sessions and sleep studies review
- Formal didactic sessions - core curricular conferences, journal club, multi-disciplinary/case conferences
- Address the issues of patient care from different perspectives (medical, psychological, psychiatric)
- QA/QI meetings
- Attendance in educational meetings – APSS, Grand rounds
- Didactic sessions on medical ethics

### **Evaluation Methods:**

- Direct observation in the clinical setting
- Evaluation of the patient care documentation
- Presentations at journal club, multi-disciplinary or case conference, grand rounds
- Mentor evaluation
- Written evaluation by faculty and formal review with program director including written evaluation
- 360 evaluation and patient surveys
- Chart review

## **F. Systems-Based Practice**

This competency involves the understanding and awareness of health care systems that affect quality of care; provide cost-effective care; advocate for quality patient care; work with hospital management and interdisciplinary teams to improve patient care showing the inter-connectedness of different areas including acute and rehabilitative care, payer systems, cost effective care and inter-disciplinary services.

Sleep Medicine specific systems-based practice core competencies include:

- Comprehending and applying practice guidelines and practice parameters related to sleep medicine
- Providing comprehensive care to patients using allied health professional resources and appropriate referrals to enhance the quality of life of patients, e.g., home health care, CPAP providers, etc.
- Skills for daily practice of sleep medicine, e.g., time management, scheduling, accurate and clear documentation, and efficient communication with referring physicians
- Understanding healthcare systems (managed care vs. other); availability/limits of healthcare resources; acting as patient advocate within financial constraints, e.g., preapproval for study, CPAP or medication
- Knowing the community health care systems including facilities for ambulatory care, for CPAP and other supplies, acute care, skilled care, rehabilitation, psychiatric care, substance abuse care, nursing homes, home health care and hospice organizations.
- Understanding legal aspects of sleep disorders as they impact patients and their families,

### **Teaching Methods:**

- Bedside teaching and faculty role-modeling
- Educational sessions on topics such as managed care, Medicare/Medicaid
- Daily case review sessions and sleep studies review
- Review of practice parameters
- Formal didactic sessions - core curricular conferences, journal club, multi-disciplinary or case conferences that address the issues of patient care from different perspectives (e.g., presentation by a dentist on role of dental appliances and what health care systems cover this mode of therapy)
- QA/QI meetings
- Attendance in educational meetings – APSS, Grand rounds

### **Evaluation Methods:**

- Direct observation in the clinical setting
- Evaluation of the patient care documentation
- Presentation at journal club, multi-disciplinary or case conference, grand rounds
- Mentor evaluation
- Written evaluation by faculty and formal review with program director, including written evaluation
- 360 evaluation and patient surveys
- Chart review
- Performance on the sleep board examination

## 5. Goals and objectives of each individual component of fellowship training

### Goals & Objectives: Sleep Medicine Adult Clinic Experience

Program Director: P Sahota MD

Faculty: All

PGY: 4 and above

#### Description of Rotation or Educational Experience

The Sleep Medicine Clinic and consultation offers an excellent opportunity for seeing a variety of patients with sleep disorders. The goal of this experience is to master the art of history taking, performing physical-neurological examination applied to Sleep Medicine, evaluation and management of adult patients with sleep disorders, and to expand the fellow's knowledge of clinical Sleep Medicine. The experience includes outpatient and any inpatient sleep consultations. The outpatient experience will consist of three half days of clinic per week.

#### Patient Care

##### Goal

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

##### Objectives

At the end of this experience, the fellow will be able to:

- Develop a comprehensive medical history for the Sleep Medicine patient, especially history related to sleep problems.
- Perform a complete physical and neurological examination.
- Analyze the clinical presentation and formulate the diagnosis and differential diagnosis.
- Prepare a diagnostic work-up for patients with sleep disorders, including document evaluation and consultation notes.
- Analyze various therapeutic options (medical, surgical, and other) to develop a management plan for patients.

#### Medical Knowledge

##### Goal

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.

##### Objectives

At the end of this experience, the fellow will be able to:

- List and describe types of sleep, sleep patterns, and sleep disorders in adults, especially as described in the ICSD.
- Explain the methods of evaluation and management of sleep disorders.
- Evaluate a variety of patients with different sleep orders; including sleep related breathing disorders, hypersomnolence, insomnia, disorders of circadian rhythm, parasomnias, sleep related movement disorders, sleep problems related to medical, neurological, and psychiatric conditions and secondary to medications and drug use.
- Apply information obtained from research, reading, and literature reviews related to sleep orders.

#### Practice- Based Learning and Improvement

##### Goal

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning.

##### Objectives

At the end of this experience, the fellow will be able to:

- Reflect on their own limitations in the field of Sleep Medicine and create a learning plan to improve their knowledge of sleep disorders.
- Access online resources to improve their knowledge of sleep disorders.

## Systems Based Practice

### Goal

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

### Objectives

At the end of this experience, the fellow will be able to:

- Apply practice guidelines and practice parameters related to Sleep Medicine.
- Provide comprehensive health care, including use of appropriate referrals, allied health professional resources, and community healthcare providers to enhance the quality of life of patients with sleep disorders.
- Demonstrate skills of professional practice of Sleep Medicine, including time management, clinic scheduling, and efficient communication with referring physicians.
- Accurately document medical records, including clinic notes, sleep studies, and other diagnostic tests.
- Explain the availability and limitation of healthcare resources for patients with sleep disorders.
- Act as a patient advocate within the constraints of the health care system, including pre-approval for testing or medications.
- Explain the legal aspects of sleep disorders as they impact patients and their families.

## Professionalism

### Goal

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

### Objectives

At the end of this experience, the fellow will be able to:

- Engage in timely communication with patient and health care professionals.
- Appropriately document clinical evaluations and sleep studies in a timely manner.
- Collaborate with other medical teams for continuity of care, including timely and useful information.
- Exhibit ethical and professional behavior with honesty, integrity, compassion, and confidentiality.
- Demonstrate respect for the patient, irrespective age, culture, disability, ethnicity, gender, religious belief, sexual orientation, or socioeconomic status.
- Address clinical situations, irrespective of etiology, including medical, psychological, or psychiatric causes.
- Demonstrate professional conduct and acknowledge professional errors.

## Interpersonal and Communication Skills

### Goal

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

### Objectives

At the end of this experience, the fellow will be able to:

- Develop therapeutic relationships with patient, family, and other members of the health care team, including clinic staff, nurses, respiratory therapists and social services personnel.
- Demonstrate effective communication skills, both verbal and non-verbal, and sensitivity with sleep disorder patients, especially as related to psychological or psychiatric illness, ethnic and social backgrounds.
- Demonstrate good listening skills.

- Collaborate with other health care personnel concerning medical, psychological, and behavioral issues of sleep disorder patients.
- Participate in the education of patients, families, and other health care professionals concerning sleep disorders.
- Obtain, interpret and evaluate consultation from other medical specialties.
- Provide effective, clear communication and recommendations as a consultant to other specialties.
- Involve patients in decision-making when ordering procedures, discussing various evaluation and treatment strategies, including risks, benefits, and cost-effectiveness.

### Teaching Methods

• Bedside teaching outpatient/inpatient	• APSS meetings	• Grand rounds, journal club, didactic/Core curricular session, Case conferences, research conferences
• Daily review of sleep studies	• Selected papers	
• QA/QI meetings	• Online education	
• Board review sessions	• ICSD case discussions	

### Assessment Method (Fellows)

• Written evaluation by faculty every two months, based on direct observation	• 360 Evaluation: Written evaluation by nurses, staff, technologists and others, every three months	• Patient Surveys
• Chart review two times/year	• Sleep study scoring, review and comparison (1 normal and 1 abnormal sleep study)	• Mentor evaluations two times per year
• Direct observation of sleep study review and assessment	• Self-evaluation by Fellow every six months	• Formal written review with program director two times/year
• Performance on Sleep board examination	• Evaluation of fellow presentations	• Final formal evaluation in writing at the end of the program by program director
• Performance on Sleep in-training examination		

### Assessment Method (Program Evaluation)

- Fellows complete a written evaluation of faculty once a year.
- Patients complete faculty/attending evaluation surveys on an ongoing basis.
- The program is evaluated by fellows once a year (New Innovations)
- The program is evaluated by faculty once a year.
- Curriculum committee reviews program once a year.
- Sleep Board examination scores
- Sleep fellow in training examination

### Level of Supervision

- Patient care: Direct supervision by attending physician
- Polysomnographic studies: Direct supervision by attending physician

### Educational Resources

- Principles and Practice of Sleep Medicine by Kryger, Roth, and Dement
- Atlas of Sleep Medicine by Chokroverty Thomas, and Hatt.
- Brain Control of Wakefulness and Sleep by Steriade and McCarley
- Breathing Disorders in Sleep by McNicholas and Phillipson
- Clinical Sleep Disorders by Carney, Barry, and Gever.
- Epidemiology of Sleep by Lichstein, Durrence, Riedel, Taylor, and Bush.
- Handbook of Clinical Neurology Volumes 79 and 80 on Human Hypothalamus
- Handbook of Sleep Disorders by Thorpy.
- Acute and Emergent Events in Sleep by Chokroverty and Sahota
- ICSD
- Neurology of Breathing by Bolton, Chen, Wijdicks, and Zifko
- Sleep and Brain Plasticity by Maquet, Smith, Stickgold.

- Sleep and Movement Disorders by Chokroverty, Henning, and Walters
- Sleep Apnea by Pack
- Sleep by Billard
- Sleep Disorder Source Books by Sutton
- Sleep Medicine and Clinical Practice by Silver, Krahn, and Morgenthaler
- Sleep Medicine by Lee-Chiong, Sateia, and Carskadon.
- Sleep Medicine by Aldrich
- Saved interesting case examples
- Additional handouts

Journals:

- Sleep
- Sleep Medicine
- Journal of Clinical Sleep Medicine
- New England Journal of medicine
- Sleep Medicine Clinics
- Sleep Medicine Reviews
- Continuum

Multimedia:

- Audio/video
- PowerPoint presentations/slides
- Audio/Video

**Goals & Objectives: HST VA Sleep Medicine: VA Experience**

**Program Director: P Sahota MD, FAASM**

**Faculty responsible for this experience: J Johnson DO, FAASM**

**PGY: 4 & above**

**Description of Rotation or Educational Experience**

VA Medical Center offers an excellent opportunity for seeing a variety of patients with sleep disorders. The goal of this activity is to master the art of history taking, performing physical examination applied to Sleep Medicine, evaluation and management of adult patients with sleep disorders, pulmonary disorders and their relationship to sleep, understanding of pulmonary function tests, psychosomatic disorders and their relationship to sleep. There are three components to this program:

- a. Sleep Disorders clinic: 1<sup>st</sup> Friday of the month; 1-5 pm. Supervisor: Dr Johnson. This clinic experience consists of evaluation of patients with sleep disorders, presentation to the attending physician, review of tests, case discussion and management plan
- b. Pulmonary clinic: every Thursday; 1-5 pm. Supervisor: Dr Johnson. This experience consists of evaluation of patients with pulmonary disorders, case discussion (including pulmonary function tests, arterial blood gases and sleep studies) with the attending physician, and management plan
- c. Psychosomatic clinic: Alternate Thursday; 10-12. Supervisor: Dr Hemme. This clinic experience consists of evaluation of patients with psychiatric disorders (anxiety, depression, PTSD, personality disorders and others) and sleep disorders, review and discussion of psychiatric evaluation, and management plan

**Patient Care**

**Goal**

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

**Objectives**

At the end of this experience, the fellow will be able to:

- Develop a comprehensive medical history for the patient, including history related to sleep problems in patients with pulmonary disorders and psychiatric disorders.
- Perform a complete physical examination and appropriate psychiatric examination.
- Analyze the clinical presentation and formulate the diagnosis and differential diagnosis.
- Prepare a diagnostic work-up for patients with sleep disorders, including those with pulmonary disease and psychiatric disease
- Interpret and explain the significance of pulmonary evaluation (including pulmonary function tests, arterial blood gases) and psychiatric evaluation.
- Analyze various therapeutic options (medical, psychiatric, other) to develop a management plan for patients.

## Medical Knowledge

### Goal

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.

### Objectives

At the end of this experience, the fellow will be able to:

- List and describe types of sleep, sleep patterns, and sleep disorders in adults, including those with pulmonary and psychiatric disorders such as OSA, COPD, and pulmonary disorders; PTSD, anxiety, depression and other psychiatric disorders.
- Explain the methods of evaluation and management of these disorders.
- Evaluate a variety of patients with different sleep disorders, including sleep apnea, hypersomnia, insomnia, disorders of circadian rhythm, parasomnias, sleep problems, and those related to pulmonary and psychiatric conditions and secondary to medications and drug use.
- Apply information obtained from research, reading, and literature reviews related to sleep disorders.

## Practice- Based Learning and Improvement

### Goal

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning.

### Objectives

At the end of this experience, the fellow will be able to:

- Reflect on their own limitations in the field of Sleep medicine (sleep disorders especially sleep apnea, sleep disorders related to pulmonary disorders, insomnia, sleep disorders related to drug use and sleep disorders in patients with psychiatric disease) and create a learning plan to improve their knowledge of sleep disorders.
- Acquire and demonstrate knowledge of the methods of assessment related to these disorders – to include polysomnographic sleep studies, pulmonary function tests, arterial blood gases, psychiatric evaluation.
- Explain comprehensive care relevant to sleep disorders that includes medical/pharmacological and behavioral treatments.
- Utilize online resources to regarding sleep disorders, including those related aspects of pulmonary medicine and psychosomatic medicine, and apply information from those resources to patient care.

## Systems Based Practice

### Goal

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

### Objectives

At the end of this experience, the fellow will be able to:

- Apply practice guidelines and practice parameters related to Sleep medicine.

- Explain the practice of sleep medicine in the VA system, including differences from other systems such as provision of care and medication approvals)
- Provide comprehensive health care, including use of appropriate referrals, allied health professional resources, and community healthcare providers to enhance the quality of life of patients with sleep disorders.
- Demonstrate skills of professional practice of sleep medicine, including time management, clinic scheduling, and efficient communication with referring physicians.
- Accurately document medical records, including clinic notes and diagnostic tests.
- Explain the availability and limitation of healthcare resources for patients with sleep disorders.
- Act as a patient advocate within the constraints of the health care system, including pre-approval for testing or medications.
- Explain the legal aspects of sleep disorders as they impact patients and their families.

## Professionalism

### Goal

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

### Objectives

At the end of this experience, the fellow will be able to:

- Engage in timely communication with patient and health care professionals.
- Appropriately document clinical evaluations in a timely manner.
- Collaborate with other medical teams for continuity of care, including timely and useful information.
- Exhibit ethical and professional behavior with honesty, integrity, compassion, and confidentiality.
- Demonstrate respect for the patient, irrespective age, culture, disability, ethnicity, gender, religious belief, sexual orientation, or socioeconomic status.
- Address clinical situations, irrespective of etiology, including medical, psychological, or psychiatric causes.
- Demonstrate professional conduct and acknowledge professional errors.

## Interpersonal and Communication Skills

### Goal

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

### Objectives

At the end of this experience, the fellow will be able to:

- Develop therapeutic relationships with patient, family, and other members of the health care team, including clinic staff, nurses, respiratory therapists and social services personnel.
- Demonstrate effective communication skills, both verbal and non-verbal, and sensitivity with sleep disorder patients, especially as related to psychological or psychiatric illness, ethnic and social backgrounds.
- Demonstrate good listening skills.
- Collaborate with other health care personnel concerning medical, psychological, and behavioral issues of sleep disorder patients.
- Participate in the education of patients, families, and other health care professionals re: sleep disorders.
- Obtain, interpret and evaluate consultation from other medical specialties.
- Provide effective, clear communication and recommendations as a consultant to other specialties.
- Involve patients in decision-making when ordering procedures, discussing various evaluation and treatment strategies, including risks, benefits, and cost-effectiveness.

## Teaching Methods

- Bedside teaching
- Selected papers
- Grand rounds, journal club,

• Online education	• APSS meetings	didactic/core curricular session, case conferences
<b>Assessment Method (Fellows)</b>		
• Written evaluation by faculty every two months, based on direct observation	• Mentor evaluation two times per year	• Formal written review with program director two times/year
• Chart review two times/year	• Self-evaluation by Fellow every six months	• Final formal evaluation in writing at the end by the program director
• Performance on Sleep board examination	• Performance on Sleep in training examination	
<b>Assessment Method (Program Evaluation)</b>		
• Fellows complete a written evaluation of faculty once a year.		
• Patients complete faculty/attending evaluation surveys on an ongoing basis.		
• The program is evaluated by fellows once a year (New Innovations)		
• The program is evaluated by faculty once a year.		
• Curriculum committee reviews program once a year.		
• Sleep Board examination scores		
• Sleep Medicine fellow in training examination		
<b>Level of Supervision</b>		
• Sleep Disorders clinic: Direct supervision by attending physician		
• Pulmonary clinic: Direct supervision by attending physician		
• Psychosomatic clinic: Direct supervision by attending physician		
<b>Educational Resources</b>		
• Atlas of Sleep Medicine by Chokroverty, Thomas, and Hatt.		
• Breathing Disorders in Sleep by McNicholas and Phillipson		
• Sleep Apnea by Pack		
• Neurology of Breathing by Bolton, Chen, Wijdicks, and Zifko		
• Clinical Handbook of Insomnia by Attarian		
• ICSD, 2005		
• Practice Parameters by AASM		
• Clinical Sleep Disorders by Carney, Barry, and Gever.		
• Epidemiology of Sleep by Lichstein, Durrence, Riedel, Taylor, and Bush.		
• Handbook of Sleep Disorders by Thorpy.		
• Principles and Practice of Sleep Medicine by Kryger, Roth, and Dement		
• Sleep Disorder Source Books by Sutton		
• Sleep Medicine and Clinical Practice by Silver, Krahn, and Morgenthaler		
• Sleep Medicine by Lee-Chiong, Sateia, and Carskadon.		
• Sleep Medicine by Aldrich		
• Additional handouts/papers recommended by faculty		
• PowerPoint presentations/slides		
• Online resources		
• Sleep		
• J of Clinical Sleep Medicine		
• Sleep Medicine		

**Goals & Objectives: Sleep Medicine Lab Experience****Program Director: P Sahota MD****Faculty: All****PGY: 4 and above****Description of Rotation or Educational Experience**

The goal of this experience is to provide an opportunity for the trainees to correlate the findings of sleep tests in the context of sleep disorders. Each case is discussed and reviewed in the context of the sleep study findings. Diagnostic value of the test is discussed. Types of therapeutic interventions used in testing (CPAP, BiPAP, masks, nasal pillows, etc.) are reviewed. The clinical situation, diagnosis, differential diagnosis and management plan for each patient is discussed. Appropriate therapeutic intervention is then relayed to the referring physician. Aside from clinical and technological aspects, there is opportunity to discuss and learn the applied basic science aspects of sleep medicine.

**Patient Care****Goal**

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

**Objectives**

At the end of this experience, the fellow will be able to:

- Analyze medical documentation to determine if a sleep study is indicated for a particular patient.
- Collaborate with referring physicians about patients with sleep disorders.
- Describe the types of sleep tests for children and adults (e.g. PSG, MSLT/MWT, actigraphy) and explain the indications, counter indications, limitations, advantages, and purpose of each.
- Analyze sleep test results and other information to formulate a diagnosis and management for their patients.
- Explain details of various therapeutic options, including medical, surgical, behavioral/cognitive or other possibilities.
- Explain details of various therapeutic modalities, including CPAP, BiPAP, and masks, and appropriate applications of those modalities.

**Medical Knowledge****Goal**

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.

**Objectives**

At the end of this experience, the fellow will be able to:

- Compare and contrast the details of different types of sleep tests, including the pros, cons, and usefulness.
- Explain the variables of normal sleep.
- Assimilate and explain new research, latest scoring criteria, and therapeutic methods for children and adults in the field of sleep medicine.
- Explain the effect of age on sleep, from childhood to elderly.
- Observe and analyze the effects of sleep loss or deprivation as indicated in sleep studies.
- Observe and analyze various types of sleep and sleep disorders and their diagnosis by sleep studies, including sleep apnea, hypersomnolence, parasomnias, insomnia, disorders of circadian rhythm, sleep problems related to medical, neurological, and psychiatric conditions, and problems secondary to medications and drug use.
- Describe the effects of various medications on sleep.
- Describe methods of evaluation and management of sleep disorders.

**Practice- Based Learning and Improvement****Goal**

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning.

**Objectives**

At the end of this experience, the fellow will be able to:

- Reflect on their limitations of knowledge, as well as interests, in the field of sleep medicine and create a learning plan to broaden their knowledge of sleep medicine.
- Access online resources and utilize information technology to improve knowledge of sleep disorders.

## Systems Based Practice

### Goal

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

### Objectives

At the end of this experience, the fellow will be able to:

- Apply practice guidelines and parameters related to sleep medicine
- Provide comprehensive health care including appropriate referrals to other physicians and allied health professional resources and community healthcare providers
- Demonstrate mastery of skills for practice of sleep medicine, including time management, clinic scheduling, and efficient communication with referring physicians
- Document clinic notes, sleep studies, diagnostic tests, and other medical records in a timely and accurate manner.
- Explain the availability and limitation of healthcare resources for patients with sleep disorders and act as a patient advocate within those constraints, including preapproval of medications and procedures.
- Explain the legal aspects of sleep disorders as they impact patients and their families.

## Professionalism

### Goal

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

### Objectives

At the end of this experience, the fellow will be able to:

- Communicate in a timely manner with patients and health care professionals, especially referring physicians.
- Formulate accurate, appropriate documentation of clinical evaluations and sleep studies.
- Coordinate patient's care with other medical teams to provide continuity of care for patients with multiple medical issues and referring physicians.
- Demonstrate ethical, professional behaviors, including integrity, compassion, and confidentiality.
- Demonstrate respect for patients and colleagues as individuals, regardless of age, culture, disability, ethnicity, gender, socioeconomic background, religious belief, sexual orientation and other medical, psychological, or psychiatric issues.

## Interpersonal and Communication Skills

### Goal

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

### Objectives

At the end of this experience, the fellow will be able to:

- Develop sound therapeutic relationships with patients, families, and other members of the health care team.
- Communicate effectively, both verbally and nonverbally, with patients who come from varying ethnic and social backgrounds and/or who have other medical issues, including psychological or psychiatric illness.
- Demonstrate good listening skills when communicating with the patient.
- Collaborate with other health care professionals, including clinic staff, nurses, technologists, respiratory services, and social services personnel.
- Participate in the education of patients, families, technologists, students, and other health care professionals concerning sleep disorders.
- Obtain, interpret, and evaluate consultations from other medical specialties.
- Provide effective consultation to other medical specialties.
- Involve patients and families when suggesting procedures, evaluations and treatments, in light of the particular financial, medical, and personal situations of the patient.

## Teaching Methods

<ul style="list-style-type: none"> <li>• Daily review of sleep studies</li> <li>• Bedside teaching</li> <li>• Consultations</li> <li>• QA/QI meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Educational samples</li> <li>• Selected papers</li> <li>• APSS meetings</li> <li>• Online education</li> </ul>	<ul style="list-style-type: none"> <li>• Grand rounds, journal club, didactic/core curricular session, case conferences, research conferences</li> </ul>
<b>Assessment Method (Fellows).</b>		
<ul style="list-style-type: none"> <li>• Written evaluation by faculty every 2 months</li> <li>• Chart review 2 times/year</li> <li>• Direct observation of sleep study review and assessment</li> <li>• Performance on Sleep board examination</li> </ul>	<ul style="list-style-type: none"> <li>• Written evaluation by nurses, staff, technologists and others, every 3 months</li> <li>• Sleep study scoring, review and comparison (1 normal and 1 abnormal sleep study)</li> <li>• Self-evaluation by Fellow every 6 months</li> </ul>	<ul style="list-style-type: none"> <li>• Patient Surveys</li> <li>• Mentor evaluations 2 times per year</li> <li>• Formal written review with program director 2 times/year</li> <li>• Final formal evaluation in writing at the end of the program by program director</li> </ul>
<b>Assessment Method (Program Evaluation)</b>		
<ul style="list-style-type: none"> <li>• Fellows complete a written evaluation of faculty once a year.</li> <li>• Patients complete faculty/attending evaluation surveys on an ongoing basis.</li> <li>• The program is evaluated by fellows once a year (New Innovations)</li> <li>• The program is evaluated by faculty once a year.</li> <li>• Curriculum committee reviews program once a year.</li> <li>• Sleep Board examination scores</li> <li>• Sleep in-training examination scores</li> </ul>		
<b>Level of Supervision</b>		
<ul style="list-style-type: none"> <li>• Polysomnographic studies: Direct supervision by attending physician</li> <li>• Patient Care: Direct supervision by attending physician</li> </ul>		
<b>Educational Resources</b>		
<p>Textbooks:</p> <ul style="list-style-type: none"> <li>• Principles and Practice of Sleep Medicine by Kryger, Roth, and Dement.</li> <li>• Sleep Medicine and Clinical Practice by Silver, Krahn, and Morgenthaler</li> <li>• Sleep Disorder Source Book by Sutton</li> <li>• Acute and Emergent Events in Sleep Disorders by Chokroverty and Sahota</li> <li>• ICSD</li> <li>• Atlas of Sleep Medicine by Chokroverty, Thomas, and Hatt.</li> <li>• Clinical Disorders by Carney, Barry, and Geyer.</li> <li>• Sleep Medicine by Aldrich</li> <li>• Neurology of Breathing by Bolton, Chen, Wijdicks, and Zifko</li> <li>• Sleep and Movement Disorders by Chokroverty, Henning, and Walters</li> <li>• Breathing Disorders in Sleep by McNicholas and Phillipson</li> <li>• Handbook of Sleep Disorders by Thorpy</li> <li>• Sleep Apnea by Pack</li> <li>• Handbook of Clinical Neurology Volume 79 and 80 on Human hypothalamus</li> <li>• Brain Control of Wakefulness and Sleep by Steriade and McCarley</li> <li>• Sleep Medicine by Lee-Chiong, Sateia, and Carskdon</li> <li>• Latest Sleep Scoring Manual</li> <li>• Epidemiology of Sleep by Lichstein, Durrence, Riedel, Taylor, and Bush</li> <li>• Sleep by Billard</li> <li>• Saved interesting case examples</li> </ul>		
Journals:		

- Sleep
- Sleep Medicine
- Journal of Clinical Sleep Medicine
- New England Journal of medicine
- Sleep Medicine Clinics
- Sleep Medicine Reviews
- Continuum

Multimedia:

- Audio
- Video
- Powerpoint presentations/slides

**Goals & Objectives: Sleep Medicine Pediatric Clinic**

**Program Director: P Sahota MD**

**Faculty: N Patel MD**

**PGY: 4 & above**

**Description of Rotation or Educational Experience**

This is an interdisciplinary experience. The fellow will have the opportunity to see children with sleep problems and learn the evaluation and management of children with sleep disorders. These may be primary sleep disorders or sleep problems in children with other neurological disorders.

**Patient Care**

**Goal**

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

**Objectives**

At the end of this experience, the fellow will be able to:

- Compile a comprehensive medical history, specifically developmental history and history related to childhood sleep problems.
- Perform physical and neurological examinations in children of different ages.
- Analyze the clinical presentation and formulate the diagnosis and differential diagnosis of a child with sleep problems who may also have other disorders.
- Formulate and document diagnostic workups for common childhood sleep problems.
- Evaluate the choice and rationale for various therapeutic interventions in childhood sleep disorders such as sleep apnea, hypersomnias, childhood insomnia, parasomnias, disorders of circadian rhythms and certain sleep disorders in children with neurologic/medical disorders.

**Medical Knowledge**

**Goal**

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.

**Objectives**

At the end of this experience, the fellow will be able to:

- Demonstrate a comprehensive knowledge of sleep and sleep disorders and apply that knowledge to the sleep disorders of pediatric patients.
- Demonstrate mastery of the methods of evaluation and management of sleep disorders in children, including sleep apnea, hypersomnolence, insomnia, disorders of circadian rhythm, parasomnias, and sleep problems related to medical, neurological and psychiatric conditions and secondary to medications and drug use.
- Reflect on their knowledge base of sleep disorders in children and develop a learning plan including concurrent reading and literature review to increase their knowledge base of sleep disorders in children.

- Describe the clinical and polysomnographic features of normal and abnormal sleep in children of different ages.

### **Practice- Based Learning and Improvement**

#### **Goal**

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning.

#### **Objectives**

At the end of this experience, the fellow will be able to:

- Explain the parameters of normal sleep in children of different ages.
- Utilize information technology to increase their knowledge of sleep disorders and their evaluation and management in children

### **Systems Based Practice**

#### **Goal**

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

#### **Objectives**

At the end of this experience, the fellow will be able to:

- Apply practice guidelines and parameters of pediatric sleep medicine.
- Provide comprehensive health care for their child patients, including use of appropriate referrals to other health and community resources.
- Demonstrate mastery of skills for practice of sleep medicine, including time management, clinic scheduling and efficient communication with referring physicians.
- Document and maintain accurate medical records, including clinic notes, sleep studies, and other diagnostic tests.
- Act as an advocate for their patient concerning the availability and limitations of healthcare resources as well as social and financial restraints, including pre-approval of tests and procedures
- Explain the legal aspects of sleep disorders and school issues as they impact children and families.

### **Professionalism**

#### **Goal**

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

#### **Objectives**

At the end of this experience, the fellow will be able to:

- Practice timely communication with patient, health care professionals, and referring physicians.
- Appropriately document clinical evaluations in a timely manner.
- Collaborate with referring physicians and services and provide timely communication to those physicians to provide the best care for the patient.
- Exhibit ethical and professional behavior, including honesty, integrity, compassion and confidentiality
- Demonstrate respect, courtesy, and sensitivity to patients and their families regardless of age, culture, disability, ethnicity, gender, socioeconomic background, religious beliefs, and sexual orientations.

### **Interpersonal and Communication Skills**

#### **Goal**

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

#### **Objectives**

At the end of this experience, the fellow will be able to:

- Demonstrate development of sound therapeutic relationships with their child patient, the child's family, and other members of the health care.
- Explain the ways that communicating with a child is different than communicating with an adult patient.
- Utilize effective communication skills with their child patients.
- Demonstrate mastery of listening skills with child patients, including putting the child at ease.
- Demonstrate respect for different ethnic and social backgrounds, gender, and communicate, both verbally and non-verbally, in a sensitive manner with both the child patient and their family.

- Collaborate with pediatricians and other health care personnel concerning medical, psychological, and behavioral issues related to sleep and sleep disorders and interact with teachers or school authorities as needed.
- Demonstrate skill in educating the child patient, family, school, and other health care professionals concerning sleep disorders.
- Evaluate and provide effective consultation to pediatric specialties concerning sleep disorders.
- Work as a team with clinic staff, nurses, and other healthcare professionals including respiratory therapists and social services personnel.
- Involve the patient and family in the decision-making process when ordering procedures, and discussing various evaluation and treatment strategies.

#### **Teaching Methods**

<ul style="list-style-type: none"> <li>• Bedside teaching</li> <li>• Case discussions</li> <li>• Online education</li> </ul>	<ul style="list-style-type: none"> <li>• Grand rounds/core curriculum sessions/journal club</li> <li>• Research conferences</li> </ul>	<ul style="list-style-type: none"> <li>• APSS meetings</li> <li>• ICSD case reviews</li> </ul>
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#### **Assessment Method (fellows)**

<ul style="list-style-type: none"> <li>• Written evaluation by faculty every 2 months</li> <li>• Chart review 2 times/year</li> <li>• Performance on Sleep board examination</li> <li>• Performance on in-training examination</li> </ul>	<ul style="list-style-type: none"> <li>• Written evaluation by nurses, staff, and others, every 3 months</li> <li>• Self-evaluation by Fellow every 6 months</li> </ul>	<ul style="list-style-type: none"> <li>• Mentor evaluations 2 times per year</li> <li>• Formal written review with program director 2 times/year</li> <li>• Final formal evaluation in writing at the end of the program by program director</li> </ul>
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#### **Assessment Method (Program Evaluation)**

- Fellows complete a written evaluation of faculty once a year.
- Patients complete faculty/attending evaluation surveys on an ongoing basis.
- The program is evaluated by fellows once a year (New Innovations)
- The program is evaluated by faculty once a year.
- Curriculum committee reviews program once a year.
- Sleep Board examination scores
- Sleep fellowship in-training examination

#### **Level of Supervision**

- Direct supervision by attending

#### **Educational Resources**

- Principles and Practice of Pediatric Sleep Medicine by Sheldon, Ferber, Kryger.
- Pediatric Sleep Medicine by Sheldon, Spire and Levy
- Acute and Emergent Events in Sleep Disorders by Chokroverty and Sahota
- Atlas of Sleep Medicine by Chokroverty, Thomas, and Hatt.
- Practice parameters (especially as several parameters are different for children e.g. Apnea index)
- Atlas of Clinical Sleep Medicine by Kryger
- AASM – review/ state of the art courses
- Audio/Video
- PowerPoint presentations/slides
- Selected articles (Dr Patel)
- Sleep
- J of Clinical Sleep Medicine

- Sleep Medicine
- Saved interesting case examples

### **Goals & Objectives: Sleep Medicine Elective Clinics Experience**

**Program Director: P Sahota MD**

**Faculty: D. Chang MD (ENT); A Muzaffar MD (Cleft lip/ Cleft palate)**

**PGY: 4 and above**

#### **Description of Rotation or Educational Experience**

Evaluation of the upper airway is important for a number of sleep disorders especially snoring, sleep apnea, and cleft lip/cleft palate and oro-facial anomalies. The goal of this clinical experience is to offer the sleep fellow an opportunity to understand disease processes affecting the upper airway, understand the methods clinical evaluation of the upper airway in these patients. It will consist of at least 2-3 days of rotation in otolaryngology and cleft lip/ cleft palate clinics.

#### **Patient Care**

##### **Goal**

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

##### **Objectives**

At the end of this experience, the fellow will be able to:

- Take a medical history, specifically history related to upper airway problems.
- Perform physical examinations, and observe the endoscopic evaluation of the upper airway – e.g. nasopharyngoscopies and video fluoroscopy.
- Analyze the clinical presentation and understand the diagnosis and differential diagnosis of patients undergoing upper airway evaluation.
- Describe components of the diagnostic work-up for such patients.
- Explain the therapeutic modalities for patients with upper airway problems – pharmacological (e.g. decongestant/steroid use) to surgical (palatoplasty, lip-palate repair or other).

#### **Medical Knowledge**

##### **Goal**

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.

##### **Objectives**

At the end of this experience, the fellow will be able to:

- Describe the anatomy of the upper airway (especially insomnia), including methods of evaluation of the upper airway.
- List the causes of upper airway obstruction and sleep related breathing problems in patients with upper airway anomalies – deviated nasal septum, enlarged tonsils, enlarged adenoids, turbinate hypertrophy, cleft lip, cleft palate
- List and describe the treatment options and effect of each treatment option (septoplasty, turbinectomy, palatoplasty, tonsillectomy, adenoidectomy, palatal flap) on upper airway functioning and breathing during sleep

#### **Practice- Based Learning and Improvement**

##### **Goal**

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning.

##### **Objectives**

At the end of this experience, the fellow will be able to:

- Explain methods of upper airway evaluation. This provides an opportunity to understand the anatomy and physiology of upper airway in sleep apnea and other sleep related breathing disorders in patients with upper airway anomalies.
- Utilize online resources and information technology to access research and information on sleep disorders in patients with upper airway anomalies.

## Systems Based Practice

### Goal

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

### Objectives

At the end of this experience, the fellow will be able to:

- Apply practice guidelines and practice parameters related to sleep apnea in patients with upper airway anomalies.
- Demonstrate skills for practice of sleep medicine related to upper airway problems, including time management, scheduling, and efficient communication with referring physicians.
- Explain the documentation required of sleep evaluations.

## Professionalism

### Goal

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

### Objectives

At the end of this experience, the fellow will be able to:

- Communicate effectively with patients and other health care professionals, including referring physicians as per the guidance of the supervising physician.
- Document clinical evaluations in an appropriate and timely manner as and when advised to do so by the supervising physician.

## Interpersonal and Communication Skills

### Goal

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

### Objectives

At the end of this experience, the fellow will be able to:

- Observe the supervising physician's approach to sound therapeutic relationships with patients, patients' families, and other members of the health care team.
- Observe effective and sensitive communication, both verbal and non-verbal, between supervising physician, patients, and parents/families.
- Demonstrate effective listening skills.
- Collaborate with other health care personnel as per guidance from the supervising physician
- Demonstrate consideration to patients and families when discussing and ordering procedures.

## Teaching Methods

• Bedside teaching – clinical evaluation and endoscopy	• Journal club	• Case discussions
• Online education	• APSS meetings	• Grand rounds/didactic/core curriculum

## Assessment Method (Fellows)

• Performance on Sleep board examination	• Self-evaluation by fellow every 6 months	• Formal written review with program director 2 times/year
• Performance in in-training examination	• Mentor evaluations two times per year	• Final formal evaluation in writing at the end of the program by program director

## Assessment Method (Program Evaluation)

- Fellows complete a written evaluation of faculty once a year.
- Patients complete faculty/attending evaluation surveys on an ongoing basis.
- The program is evaluated by fellows once a year (New Innovations)
- The program is evaluated by faculty once a year.
- Curriculum committee reviews program once a year.

- Sleep board examination scores
- Sleep fellow in-training examination

#### Level of Supervision

- Direct supervision by attending

#### Educational Resources

- Atlas of Sleep Medicine by Chokroverty, Thomas, and Hatt.
- Breathing Disorders in Sleep by McNicholas and Phillipson
- Clinical Sleep Disorders by Carney, Barry, and Gever.
- Handbook of Sleep Disorders by Thorpy.
- ICSD, 2005
- Neurology of Breathing by Bolton, Chen, Wijdicks, and Zifko
- Principles and Practice of Sleep Medicine by Kryger, Roth, and Dement
- Sleep Apnea by Pack
- Acute and Emergent events in Sleep Disorders by Chokroverty and Sahota
- Sleep by Billiard.
- Sleep Disorder Source Books by Sutton
- Sleep Medicine and Clinical Practice by Silver, Krahn, and Morgenthaler
- Sleep Medicine by Lee-Chiong, Sateia, and Carskadon.
- Sleep Medicine by Aldrich
- Audio/Video
- PowerPoint presentations/slides
- Online sources
- Saved interesting case examples

#### 6. Summary of core competency teaching & evaluation methods

Core Competency	Teaching Tools	Evaluation Tools
1. Patient Care	Bedside teaching: inpatient, outpatient clinic, consults	Written faculty evaluations based on direct observation, 360 evaluation
	Core curriculum session	Formal review with program director
	Multi - D/ case Conference	Patient survey
	QA/QI meetings	Mentor evaluation
	Journal club	Sleep/MSLT scoring review/comparison
	Daily review of sleep studies/ case discussion	Documentation review & formal Chart Review
2. Medical Knowledge	Bedside teaching: inpatient, outpatient clinic, consults	Written evaluations, 360 evaluation
	Core curriculum session	Quality of presentation in the session
	Multi – D/ Case conference	Quality of presentation in the conference
	Grand Rounds / Journal club	Grand rounds presentation
	Journal Club	Journal club presentation
	Research conference	Participation/presentation in res. conf
	Online education	Documentation review/Chart Review
	QA/QI meeting	Sleep Board pass rate
	Educational meetings - APSS	Abstract acceptance - national

		meetings
3. Practice – Based Learning and Improvement	Bedside teaching: inpatient, outpatient clinic, consults	Observation & written faculty evaluation; 360° evaluations, Patient survey
	Daily review of sleep studies/ case discussion	Documentation review / Chart Review
	Core curriculum	Sleep study/ MSLT scoring
	Multi-D/case conf./Journal club	Quality of presentation in educational sessions
	QA/QI meetings	Mentor evaluation
	Educational meetings - APSS	Abstract acceptance - national meetings
4. Interpersonal and communication skills	Interaction/observation on clinical (out patient/in patient, sleep center) and educational activities	Faculty observation & Written evaluations
	Daily review of sleep studies/ case discussion	360 evaluation
	Medical ethics session	Patient surveys and Patient Safety Net
	QA/QI meetings	Mentor evaluation
	Core curriculum /multi-D/ case conf./journal club	Interaction during educational sessions
5. Professionalism	Interaction/observation on clinical (out patient/in patient, sleep center) and educational activities	Faculty observation & Written evaluations, 360 evaluation Patient survey/ Patient safety net
	Daily review of sleep studies/ case discussion	Documentation review/Chart Review for timeliness and quality of content
	Core curric./ multi-D /J club/ res. Conf.	Interaction during educational sessions
	QA/QI Conference	QA/QI Conference
	Medical ethics session, research training, Online sessions	Mentor review
6. Systems Based Practice	Bedside teaching	Written faculty evaluations
	Multi- D/case conf/ J club	Assessment of knowledge in sessions
	Review of sleep studies/ case discussion /practice parameters	Documentation review for content related to SBP of sleep medicine
	Discussion re: precertification, insurance, medication approval	360° evaluations Patient survey, Patient Safety Net
	QA/QI meetings including technologists	QA/QI meetings
	Educational meetings - APSS	

In Addition: SESSION ON CONCEPTS OF CORE COMPETENCIES - DEFINITION, EDUCATION, AND EVALUATION

## **7. EDUCATIONAL METHODS/ACTIVITIES AND CORE COMPETENCIES COVERED:**

### **BEDSIDE TEACHING**

Direct patient care under supervision-outpatient & inpatient (fellow and faculty)  
Daily review of sleep studies and case discussions (fellow and faculty)

### **FORMAL/DIDACTIC TEACHING**

**Monday:** No formal didactic session

**Tuesday: 10:00 am - 11:00 am** Core curriculum session/ICSD topic review (Sahota)

**Wednesday: 8:05 am - 9:05 am** Neurology Grand rounds (Faculty, Fellow)  
**11:00 am – noon** Sleep Medicine Board review (Goyal)  
**5:00 pm - 6:00pm** Sleep Medicine Grand Rounds (core curriculum, journal club, Case conference & research conference (faculty & Fellow)

**Thursday:** No formal didactic session

**Friday:** 10:00 am – 11:00 am Core curriculum/ICSD case review (Sivaraman)

### **Details of curricular sessions:**

#### **Core curricular sessions (8-9 per month)**

Didactic coverage focused on an area  
Core competencies covered – MK, PC, IPC, SBP more than professionalism and PBL  
Attended by fellow and faculty (Wednesday – multiple faculty. Tuesday/Friday –assigned faculty)

#### **Case/multi-D conferences (1 per month)**

Case discussion/s and review  
Core competencies covered – PC, MK, PBL, IPC, SBP more than professionalism  
Attended by fellow and faculty

#### **Journal club (1 per month)**

Review of article/s usually related to didactic area being covered,  
Core competencies covered – MK, PBL, IPC, SBP more than PC and professionalism  
Attended by fellow and faculty

#### **Research conference (1 per month) when 5 Wednesdays/month or as needed)**

Review of research methods, applications to sleep, MU sleep projects, other latest sleep research  
Core competencies covered – MK, IPC, applications to PC more than others.

#### **Quality assurance/ Quality improvement meetings (1 every 3-4 months)**

Discussion of issues of quality of care – technological issues, clinical issues, documentation issues, competence issues  
Core competencies covered – PC, MK, PBL, IPC, P, SBP

### **OTHER**

Annual Sleep meeting (at least 1 per year) – fellow and faculty

Review of sample studies with various abnormalities – fellow with or without faculty  
Research (at least 1 project leading to abstract presentation) – fellow and faculty mentor

## **8. ASSESSMENT METHODS**

### **FELLOW EVALUATION:**

Written evaluation by the faculty (every 2 months)  
Written evaluation by nurses, staff, technologists and others (every 3 months)  
Patient surveys  
Mentor evaluations (2 times/ year)  
Chart review (2 times per year)  
Direct observation of sleep study review and assessment  
Sleep study scoring, review and comparison (1 normal and 1 abnormal sleep study)  
Formal progress review with program director (2-3 times per year)  
Performance on Sleep Board examination & in-training examination  
Self evaluation by the fellow – every 6 months  
Final formal evaluation in writing at the end of the program by the program director

### **FACULTY EVALUATION:**

Written evaluation by the fellow (once a year), patients (ongoing)

### **PROGRAM EVALUATION:**

By Fellow and any rotators (once a year)  
By Faculty (once a year)  
Program review by curriculum committee (once a year)  
Sleep Medicine in-training examination  
Sleep Board examination

## **9. Supervision of Fellow Patient Care Activities**

There is close supervision of the fellow's performance as it pertains to all patient care activities. The supervision is both direct and indirect as outlined below. There is a progressive increase in responsibility. The goal is to provide safe and evidence-based patient care while giving the opportunity to the sleep medicine fellow to develop the appropriate skills, knowledge and attitudes to become a sleep medicine physician capable of providing unsupervised care when they complete the training.

These activities can be divided into the following categories:

- 1). Supervision in the sleep disorders clinics and sleep consultation;
- 2). Supervision of the overnight polysomnographic sleep studies;

### **Supervision in the Sleep Disorders Clinic and Sleep Consultation**

The fellow participates in the Sleep Disorders Clinic including both adult and pediatric clinics. The fellow receives direct supervision, progressing to indirect supervision with direct supervision immediately available as their skills progress and levels of responsibility are increased. He/she first would see the patient by himself, take a history and examine the patient. He/she would then present to the supervising attending physician in the clinic, and then they will see the patient again together. The patient's clinical presentation, evaluation, management plan is then discussed. In most instances the fellow would then document this as clinic note which is again

reviewed by the attending sleep physician before it becomes a final document. The same applies if an inpatient consult is requested for assessment of a sleep disorder.

### **Supervision of the Overnight Polysomnographic Sleep Studies and in SDC**

There is direct and indirect supervision by an attending physician for all polysomnographs studied and/or emergent clinical issues during sleep testing. The fellow receives direct supervision, progressing to indirect supervision with direct supervision immediately available as their skills progress and levels of responsibility are increased. The fellow would review all sleep studies as well as multiple sleep latency tests and maintenance of wakefulness test performed in the Sleep Disorders Clinic. He would also view all other clinical tests that are ordered for the patients. After initial review of the polysomnographic studies, the studies are seen in entirety again with the supervising physician. The findings are discussed in relation to patient's clinical presentation. The final report is dictated by the fellow and reviewed by the supervising physician before it becomes a final document. Similarly, if a patient has an unexpected or expected medical issue during the sleep study, the attending physician may be contacted directly. If the sleep medicine fellow is contacted, he/she must call the attending physician; discuss the clinical issues before a decision is made. In case of a medical emergency (for example: chest pain), the patient is transferred to the emergency room to prevent any delay of care.

In summary, all aspects of clinical care provided by the sleep medicine fellow are supervised by an attending physician- directly or indirectly. The fellow receives direct supervision, progressing to indirect supervision with direct supervision immediately available as their skills progress and levels of responsibility are increased.

The program also has direction for progressive increase in responsibility by the fellow.

### **10. Progressive Responsibility in the Sleep Medicine Program**

Sleep Medicine is a one year fellowship program. The fellows come from varying backgrounds. These include: neurology, pulmonary, internal medicine, psychiatry, and otolaryngology. While an assessment of the fellow's background can be made during his/her interview for the position, it is reconciled during the initial meeting with the program director at the time the fellowship begins. For example: A fellow coming to the MU sleep medicine program from another institution requires Electronic Medical Record (EMR) training in addition to orientation to the UMHC systems and the VA systems. Additional training is also provided for use of the dictation systems.

The following progressive responsibility is assigned to the fellow in different settings.

#### **Progressive Responsibility in the Clinical Sleep Evaluation (Outpatient and/or Inpatient):**

The fellow is given introductory information on evaluation of a patient in the sleep disorders clinic. A template outline is available that lists important aspects of history and examination that must be done on patients with sleep disorders. After initial evaluation, the fellow will present the patient to the sleep medicine attending physician. Subsequently both will go back to the patient's room and reevaluate the patient. A decision is then made regarding the evaluation and management of the patient and discussed with the patient. This is followed by dictation of the clinic visit or inpatient evaluation note. Initially, the attending physician may dictate the note in order to teach the fellow the art of dictation of sleep related information on new patients. Subsequently, however, the fellow will dictate the note and forward it to the attending physician. The attending physician will then review, make appropriate changes, and sign, before the note is finalized. The same process is also followed for all patients seen in consult/inpatient settings.

### **Progressive Responsibility in the Sleep Disorders Center:**

As for clinical evaluations, progressive responsibility is also assigned in the Sleep Disorders Center. The fellow is initially instructed in the sleep testing including the technological aspects such as electrode placement and montages used. The fellow is required to review the sleep studies first done the previous night/weekend, followed by review of all studies in entirety with the sleep medicine attending physician. The fellow writes their preliminary findings before the study is reviewed by the attending physician. The review by the attending physician provides immediate feedback to the fellow as to the quality of the review of the sleep studies and the additional information that is needed. Initially, the attending will dictate the sleep study reports. Subsequently, the fellow will start dictating the report and forward it to the attending physician, who will review, make appropriate changes, and sign the report to finalize it. As significant changes are made to the fellow's initial report, these are shared with the fellow.

### **Progressive Responsibility for Sleep Education:**

Educational activities also progressively increase in intensity. Educational aspects of the sleep medicine program are designed so that they provide introductory sessions in the beginning of training, with specialty focused sessions later in the year. For example, initial sessions, which are done by the faculty, are dedicated to introduction to sleep medicine, normal sleep, sleep montages, and technical aspects of sleep medicine. Subsequent sessions get into the details of each specialty area within sleep medicine. As the fellow begins to get familiar with the program, he/she is then asked to make presentations during the educational sessions. Aside from sleep medicine, the education also covers other aspects of medicine and its practice, such as evidence based/cost effective care, ethics, research methods, etc., as they relate to sleep medicine. In turn, the fellow also participates in the education of rotating residents, technologists and patients. (Courses are offered by the MU system to aid in developing the fellow's teaching skills.) This also occurs in a progressive fashion. Before participating in a research project, the fellow is required to complete Institutional Review Board (IRB) mandated training on research methods and ethics. Most research is done with a faculty mentor.

**In summary, there is progressive responsibility assignment to the fellow for all clinical, educational and research activities.**

## **11. Longitudinal care experience**

The fellow has the opportunity to provide longitudinal care during the fellowship year, as follows:

### **A. Patient care:**

The Sleep disorders clinic provides excellent opportunity to see new patients and follow those patients over the year. On an average, the fellow will be assigned to see two new patients and four to five follow-ups in each half day of clinic. He/she will follow these patients for the duration of the training.

Progressive responsibility is assigned in the clinic. Early in the fellowship, the fellow will see the new patients, and then present the patient's case to the attending. The attending will then see the patient as well and model communication skills to the resident. An evaluation and management plan is developed and discussed with the patient. Initially, the attending will dictate the clinic note to demonstrate the procedure and required content to the fellow. Subsequently, the fellow will start to dictate the clinic notes on his/her patients. The clinic notes dictated by the fellow are reviewed by the attending, and

feedback is given to the fellow regarding the content and quality of the clinical consultation and its documentation. The consult form is signed by the attending physician and sent to the referring physician. Appropriate sleep and/or other diagnostic tests are ordered. Following completion of the tests, the fellow will review the findings, and see the patients again in the Sleep Disorders Clinic for follow-up.

There are three adult sleep adult disorder clinics per week (with three different supervising attending physicians), on adult psychosomatic clinic every other week, and one pediatric clinic that is also on alternate weeks. In addition, the fellow attends elective clinics in otolaryngology, cleft lip/cleft palate clinic and pulmonary clinic. All clinic patients are seen by the attending physician. In addition, the fellow will see any inpatient consults, present the case to the sleep faculty member, and follow these patients as well. The fellow will follow all patients seen by him or her on an outpatient or inpatient service.

### **B. Daily case discussion and review of the Sleep studies:**

Every evening, medical records of patients scheduled for sleep study are reviewed. On occasion, this leads to interaction by the fellow with the referring physician regarding the type and value of the sleep testing with follow-up care after the testing.

Sleep studies done the previous night are reviewed the next morning, first by the fellow and then under the supervision of the attending sleep physician. Each case is discussed and reviewed in the context of sleep study findings. Clinical correlation, diagnosis, differential diagnosis and management plan is discussed.

This information is relayed to the referring physician. Initially, the sleep studies are dictated by the attending physician. As the fellow learns the format and requirements of a thorough sleep study report, he/she will dictate the sleep study findings. Feedback is given to the fellow concerning the content and quality of his dictations. The clinic note is finalized by the attending physician after appropriate changes, as needed, and signed.

Fellows have the opportunity to provide longitudinal care as follows:

- Review of pre-study evaluation and post-study evaluations of the same patient
- Patients followed in the Sleep Disorders Clinic
- Collaboration with other providers concerning CPAP and other supplies
- Patients who get an initial baseline study followed by additional testing with CPAP or MSLT
- Patients who have sleep testing done as part of their follow-up evaluations for conditions such as weight loss, use of wake promoting agents, or as part of an evaluation for driving

Fellows have the opportunity to deal with pre-study evaluations and post-study evaluations. Some of the patients are then followed in the Sleep Disorders Clinic, offering additional longitudinal learning opportunities. Other patients may be followed along with other providers concerning CPAP and other supplies. Some patients will get an initial baseline study followed by additional testing with CPAP or MSLT giving opportunity for longitudinal experience.

### **C. Other patient care experiences:**

Sleep disorders center provides other opportunities for longitudinal care of the patients. This includes: Phone calls regarding medication issues, CPAP/ BiPAP related issues, medication refill requests etc. These experiences offer additional opportunity to follow sleep related issues in these patients and learn how they evolve over time and best methods for their resolution over time.

## 12. Rotation Format

Each monthly rotation will have the following format:

**Monday - 8:00 am -11:30 am**—Sleep studies (including MSLTs) review and case discussion (average 8-10 patients tested over the weekend)

Correspondence with referring physician, dictation, documentation and review of patients' files for the following night

**12:15 am to 5 pm**—*MU Sleep Disorders Clinic (Dr Sahota)*

**Tuesday- 8.00 am to11.30 am**—Sleep studies (including MSLTs) review and case discussion (average 6-8 patients per day),

Correspondence with referring physician, dictation, documentation and review of patients' files for the following night.

**1:00 pm to 5.00 pm**—*Sleep Disorders Clinic (Dr Sivaraman)*

**Wednesday – 8.00 am – 9.00 am** Neurology Grand rounds

**9.00 am to 11.00 am**—Sleep studies (including MSLTs) review and case discussion (average 4 patients per day)

Correspondence with referring physician, dictation, documentation and review of patients' files for following night,

**11:00 am to noon**—Board review (Dr Goyal)

**1:00 to 5:00 pm**- *1<sup>st</sup>, 3<sup>rd</sup> Wednesday each month- Pediatric clinic (Dr Patel)*

*-4<sup>th</sup> Wednesday each month – Neonatal/pediatric patient/PSG review (Dr. Ner)*

**5:00 to 6:00 pm**—Weekly Sleep Grand rounds –include core curriculum topic review, journal club, multi-D case presentation, and research.

(This time - 5 to 6 pm - selected as it is convenient for interested faculty from different specialty areas)

**Thursday - 8:00 to 10:00 am**—Sleep studies (including MSLTs) review and case discussion (average 4 patients per day)

Correspondence with referring physician, dictation, documentation and review of patients' files for following night,

**10:00 am -12:30 pm (1<sup>st</sup> and 3<sup>rd</sup> Thursday)** – *VA Psychosomatic clinic –including insomnia patients –(Dr Hemme)*

**1:00 – 5:00 pm (Thursday)** – *Respiratory Clinic \*(VA – Dr Johnson)*

**Friday – 8:00 to 10:00 am** – Sleep studies (including MSLTs) review from the previous night (average 4 patients per day),

Correspondence with referring physician, dictation, documentation

**10:00 to 11:00 am** – Case discussion (ICSD)

**1:00 to 4:30 pm**—*1<sup>st</sup> Friday – VA Sleep Disorders Clinic (Dr Johnson)*

*- 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> (& 5<sup>th</sup> when applicable) MU Sleep Disorders Clinic (Dr Sahota)*

**4:30 to 5:30 pm** – Review of patient files for the weekend.

\*In addition to the above, the sleep medicine fellow also rotates through ENT and Cleft lip and cleft palate clinic/ facial anomalies clinic. This is usually on Thursday afternoon and is covered under Respiratory clinic.

In addition to the fellow in Sleep Medicine, the program will also accommodate residents and fellows from other fields (e.g. Neurology and Pulmonary Medicine) who wish to rotate (usually 2 weeks to 1 month) through the Sleep program. These trainees will also participate in educational activities of the program. They may participate in the clinical activities but with a clear focus on assuring that the requisite experience for sleep medicine fellow is maintained. The Sleep fellow will also be asked to participate in resident and/or student education including educational presentations.

## **15. Educational Policies**

The fellows are allowed to spend an average of at least one day out of seven away from the hospital. Sleep Medicine Fellows have a fixed daytime schedule. They work an average of 11 to 12 hours per day. They do not have inpatient call after hours and do not stay on duty beyond scheduled hours. Any emergent issues are addressed by a resident on call for another service. For example, a resident in neurology, critical care, internal medicine, etc., will evaluate a patient and then discuss issues with the attending on call. A fellow can choose to be informed of any sleep study related issues.

## **Research**

Fellow education is provided in an environment of inquiry as well as scholarship. Fellows are encouraged to participate in existing research or seek out their own research projects. Fellows have made abstract presentations at the national meetings and several have publications as well. Sleep Medicine program has ongoing clinical research activities. The primary mission of the fellowship is to ensure that we train competent and superb clinicians. However, knowledge of current research developments in our field is important. The fellows should also learn the art of literature review, study design, peer review, data collection, statistical analysis, participation in clinical research and submission of abstract for national presentation/publications in peer-reviewed journals. As the fellow identifies a research interest, they discuss this with a faculty mentor. The mentor advises them regarding research methods and help in the preparation of abstracts for presentation/publications. Journal Clubs are held once a month. These also provide a forum for such an educational experience and critical literature analysis.

## **Fellow's Responsibility for Teaching**

The fellows are responsible for teaching medical students, residents, nurses, and other health care personnel. The Greek origin of the word “doctor” is teacher, thus our fellows should actively play this role as a teacher for trainees as well as for our patients.

Instruction can take several forms. It can be small formal lectures, presentation of prepared topics, and informal instruction in clinics and record reviews. The fellow should demonstrate proper techniques in obtaining a history and performing a physical and examination, and then supervise the medical students or rotating resident. Feedback is expected and essential to helping the students learn.

## **Evaluations:**

### **Faculty evaluation**

There is evaluation of the faculty by the fellow – this is done so as to keep it confidential. It is done by mixing it up with other rotating trainees – and cumulative evaluation is prepared by the fellowship co-ordinator. The fellow's confidentiality is preserved.

### **Program evaluation**

The educational effectiveness of the program is systematically evaluated, including the quality of the curriculum and the extent to which the fellows meet their educational goals. Fellow performance and outcome is used in this assessment. Outgoing fellow is asked to evaluate the program, and ongoing informal evaluations are used as well. Fellow performance and feedback are used to make adjustments to the program in order to enable the fellow to meet their educational goals e.g. past fellows have given input that has been reviewed and addressed.

The quality of the training program is also measured by the number and proportion of residents who will take and pass the Sleep Board Examination.

## **CLINICAL POLICIES**

### **Basic services provided by the fellow**

1. Primary service care for inpatients with Sleep disorders.
2. Consultation for patients with sleep disorders on other services and those needing sleep studies.
3. Outpatient clinic consultations and provision of continuing care.
4. Instruction of medical students and residents

### **Patient Safety Measures**

- Pre -test:
  - Medical History
  - List of Medications
  - Instruction to take regular medications
  - Contact Referring Physician before sleep study if any concerns, if unavailable, contact sleep medicine attending for the day
  - Obtain information re: any special needs
  - Hypo-allergenic tape
- During sleep testing:
  - Bedrails – padded, up as needed
  - Large bed
  - Video Monitoring
  - Protocol in place for acute intervention
  - Acute Response Team
  - Non-acute issue: protocol in place - call Sleep Medicine Physician or sleep medicine fellow
- Post:
  - Immediate Follow Up with Referring Physician
  - Final Report to referring physician

- Follow Up in SD Clinic
- Education:
  - Technology staff – registered in PSG technology, BLS trained
  - Faculty – BC in sleep medicine, educational sessions by and to cardiology/pulmonary medicine, otolaryngology, anesthesia
- Other
  - Blinded Scoring
  - QA/QI Meetings
  - Communication with Night Staff
  - Mock Code & Post –code analysis
  - Equipment and electrical safety
  - Back up battery power
  - Portable sleep studies for sick/unstable ICU patients
  - Acute resuscitation equipment in the SDC
  - Supplemental oxygen protocol for low saturations
  - Split night protocol for CPAP/ BiPAP
  - Induced central apnea – use BiPAP auto SV
  - Claustrophobia – patient education, explanation, wear awake, different mask options, patient relaxation

### **Guidelines for Documentation**

See house staff manual- <http://medicine.missouri.edu/gme/house-staff-manual.html>

### **The procedure for “Do not resuscitate” orders is as follows:**

This is rare for sleep medicine program. However, any DNR note should include:

1. The date and time and a clearly marked title
2. The diagnosis and prognosis
3. Assessment of the patient's competence
4. The patient's wishes
  - a. If incompetent, the family or guardian's thoughts on what the patient would have wanted if he were competent.
  - b. That the attending has discussed this with the patient and family or is aware that if has been discussed.

A DNR order should be written in the orders section of the chart at the same time and should include:

1. The date and time and a clear title
2. Reference to the progress note on that date
3. The patient's wishes regarding care of, if incompetent, the family or guardian's thoughts on what the patient would have wanted if he were competent.

### **Procedure for Verbal Orders**

The fellow or attending physician may call in verbal orders on a patient on the floor or in SDC. Whenever this occurs, the nurses or technologists or pharmacy receiving such an order should repeat the verbal order back to the fellow or attending physician and confirm its accuracy.

## **Billing**

Sleep fellows will first see all patients on the outpatient clinic or consultation service. The supervising attending physician, who would write/append with his or her own note on EMR, must attend them all. Issues of appropriate coding have been discussed with the fellows as well as with attending physicians. Periodic reviews are also made to check the appropriateness of the level of service. Any issues that arise from this review will be discussed with the resident and supervising attending physician.

## **Clinical support services**

### **Phlebotomy**

Clinical support services including phlebotomy, IV services, and messenger and transport services are available on a 24-hour basis in the University Hospital. The VA has four blood draws scheduled during a 24-hour period: 6 a.m., 1 p.m., 6 p.m., and 10 p.m.

### **Radiology**

Radiology support is available on a 24-hour basis. The University Hospital and the VA have computerized retrieval systems for looking at radiology reports.

## **DEPARTMENT POLICIES**

### **Leave and Vacation Policy**

Each fellow is allowed to have a total of twenty (20) working days of vacation. This is in accordance with our Institutional policy. In addition, up to five (5) educational days are given allowing participation in approved meeting or conferences. Attendance at national meetings is required. At least thirty (30) days advance notice is required for any leave, unless there are extreme circumstances, which will be reviewed on a case-by-case basis. If it is known in advance when leave may be taken, please advise the clinic re: the same. If patients are scheduled on the day of vacation, they must be re-scheduled. A vacation request form is available in the office and must be completed and signed by you, and the Program Director.

### **Sick leave**

If you are unable to work due to illness you must notify the fellowship Coordinator ASAP. The information will be passed on to Program director and all pertinent staff.

### **Extended leave**

Please talk to the Department Administrator and Program Director regarding the situation if extended leave becomes necessary. In order to fulfill ACGME requirements for residency completion, your residency program will be extended to cover for the time missed.

The institutional vacation and leave policy can be found at

<http://medicine.missouri.edu/gme/uploads/GME-11---Institutional-Vacation-&-Leave-Policy.pdf>

### **Moonlighting**

The Sleep Medicine program has its own policy regarding moonlighting. We do not allow fellows to moonlight during their fellowship. While time off may be reasonable, we feel that this time is best utilized resting or other activities.

### **Disciplinary Action Policy for fellows**

Please refer to the institutional policy at

<http://medicine.missouri.edu/gme/uploads/GME-02---Disciplinary-Policy.pdf>.

### **Policy regarding patient phone calls**

Patient phone calls pertaining to clinical matters (for example: patient needing earlier appointment, patient needing refill of medication, lab results) are taken by the staff at the clinic. This information is put in the fellow's mailbox and the **fellow is expected to take care of it within 24 hours**. If there is an urgent need, the fellow is paged and informed about this concern (example: A patient having an acute change in his/her status, and a patient who is running out of medication and requires an urgent renewal).

### **Long distance calls concerning patients**

If you have occasion to place long distance calls concerning patients, you should follow these steps:

1. Caller dials "78".
2. Caller waits for tone then enters their 6-digit personal authorization code that has been assigned then the # sign.
3. Caller receives regular dial tone and then enters area code plus 7-digit phone number. The Area code is required for all calls, even in the 573 areas. Do not dial a 1 before the area code.

No personal long distance calls are allowed. If an instance occurs, the hospital must be reimbursed for the expense. If you lose your PIN, you must contact DeeAnne Erickson at 882-8885.

### **Photocopying**

There is a photocopy machine outside CE 519 that is accessible to the house staff twenty-four hours a day and in SDC.

### **Policy on Relationships with the Pharmaceutical and Product Industry**

The pharmaceutical industry plays an important part in the advancement of health care in the United States. Vigorous pharmaceutical and product research is essential for continued advances in the American health care system. Nonetheless, it is important to recognize that one of the primary goals of pharmaceutical and medical product companies is to earn a profit for their shareholders. Pharmaceutical and product company representatives are contact persons for these companies. Many of them provide valuable support for the educational activities. However, the primary purpose of this representative is to be an advocate for their companies and products. Studies in medical literature have demonstrated the potential for these individuals to impact the manner in which physicians practice. They have also demonstrated the potential for conflict of interest on the part of physicians. Therefore, the Department has endorsed the following guidelines to highlight potential issues, provide a compass for interaction with individuals, and outline expectations of the department

1. All physicians have the potential of interacting with the pharmaceutical industry, including advertising and detailing. Therefore, our education programs will provide a structured environment where the learners may explore interactions with the pharmaceutical and medical product companies. Presentations by pharmaceutical and product representatives should be limited. The presentation may be made to students, residents, or fellows in the presence of a faculty member or senior administrator. In this way learners may gain experience in their interactions with the pharmaceutical and product representatives.

2. Residents, fellows, and faculty should not be subject to detailing with representatives at times when they are engaged in patient care. This applies to clinics, wards, diagnostic testing areas, structured University of Missouri School of Medicine educational activities in the hospital, or in the ambulatory care setting. The Faculty is reminded of the responsibility to protect patient confidentiality (Code of Conduct p 8). For this reason pharmaceutical and product representatives are excluded from swamps, clinics and clinic offices, wards and ward offices, and patient waiting areas. The only exception to this will occur if a pharmaceutical or product representative is participating in a formal preceptor ship. The faculty member whom the representative will be shadowing and the department head must approve such preceptorships in advance both. If the representative is to be present in patient care areas such as operating rooms or examination rooms, prior approval must be obtained from the patient.

3. Acceptance of gifts from pharmaceutical product representatives, other than gifts of nominal value is discouraged. Residents, fellows, and faculty should be aware of the costs and implications of such gifts when deciding whether or not to accept them. Each department and training program should develop their own criteria for deciding what gifts are appropriate. Examples of nominal gifts are key chains, pens, etc. Accepting on site or off site meals that are provided in the context of pharmaceutical representative and staff interaction (e.g. lectures, discussions, and conferences) is a personal decision. However, provisions should be made for those staff that would like to pay for the meal when attending such conferences, lectures, and discussions. Disclosure regarding the sponsor of the meal is expected.

While our policy is departmental, other guidelines do exist concerning gift acceptance. As an example, the American Board of Internal Medicine's recommended guidelines regarding acceptance of gifts is as follows:

*Whether physicians should accept gifts from manufacturers of drugs and devices that are being prescribed by the physician, has been addressed by a number of medical and scientific organizations and authors. Although the physician may profess that the gifts are of minor value and play no role in influencing his or her prescription practices, the potential for undue influence is clear. The American Medical Association and the American College of Physicians have indicated in their policy statements that personal acceptance of substantial gifts of subsidies from companies, such as payments for travel lodging, or personal expenses to attend conferences or meetings is considered inappropriate professional behavior and is strongly discouraged. Similarly, subsidies for loss of work time to attend conferences or meetings should not be accepted. The temptation to accept such direct gifts is great, particularly for the physician who is still encumbered with medical school debts. Part of the reason that such practice may not seem unethical to physicians recently out of training is that many schools and hospitals permitted or even encouraged accepting various gifts and meals during conferences and on-call nights in exchange for listening to a sales pitch. Such practices should be eliminated or restricted.*

4. Providing departments and divisions with unrestricted use of educational grants to be used for texts, CDs, guest speakers, and tapes should be carefully monitored by the appropriate department head and the training program directors. While it is acknowledged that such grants in many instances provide resources for trainees that otherwise may not be available, the extent to which these are utilized will be determined by each division or program.
5. Approval of the Division Director or Program Director is needed prior to soliciting or accepting educational grants or funds to support departmental activities. When funds are used to help support an event the contribution of the pharmaceutical or medical product company should be made evident to all that participate in the activity.
6. Faculty members who speak at pharmaceutical supported departmental lectures should offer disclosure.
7. No lists of residents, faculty, or fellow's names, addresses, telephone numbers, pager numbers, or email addresses shall be provided to pharmaceutical representatives, product representatives, or other vendors by the department, faculty, staff, or trainees.
8. Pharmaceutical and product representatives shall not attend any departmental conferences other than those open to the public (e.g. medical grand rounds), unless by invitation.
9. Faculty, residents, and fellows are encouraged to use generic drug names in all educational activities including lectures, rounds, conferences, and patient care. Use of only the brand name should be avoided. Generic drug names should be included in written materials distributed by the educational programs and audiovisuals used at program conferences.
10. Residents and fellows are encouraged to discuss their interactions with pharmaceutical and product representatives with the faculty. Any problems with such interactions should be brought to the attention of the Program Director, a Division Director, or the Chairman.

This represents the Department's policy for interacting with pharmaceutical representatives once they have gained access to the hospital, divisions, departments, and medical school as outlined by hospital policy.

#### **QUALITY ASSURANCE/CONTINUOUS QUALITY IMPROVEMENT PROGRAM**

The Quality Assurance and Quality Improvement Program is an ongoing, flexible, integrated, and coordinated Healthcare program that stresses a commitment to improve continuous patient care and service and resolve identified problems by assessing and improving all aspects that patient outcomes most affect. It is the responsibility of all employees, including house staff, to participate actively in the departmental QI activities. The goal of the QI program is to develop collection tools, analyze data, formulate data driven recommendations for improvement, and coordinate resolution of the identified opportunities for improvement. In identifying opportunities for improvement, the QI program places emphasis on cost, quality, access, customer service; desired patient outcome, pursues opportunity to improve care/service; allows for resolution of identified problems, assures a safe and healthy environment for patients, patient families, and employees; and ensures appropriate and effective utilization of resources

### **Quality Assurance and Improvement Activities FONT size**

1. QA/QI conference: attended by sleep medicine faculty, fellow, and polysomnographic technologists.
2. Case discussions and Case Conference: Held one Wednesday per month. The fellow who took part in the care of the patient makes the presentation. All faculty members are invited to participate in this meeting. All aspects of the patient's presentation, evaluation, diagnosis, and differential diagnosis, management, and care plans are discussed.
3. Blinded scoring of sleep studies by faculty and fellow
4. Communication with night technologists- using a notebook with two-way feedback
5. Analysis of timely reporting of the sleep studies
6. Role of in-home testing and comparison of in-home vs. in-center studies
7. Changing polysomnogram interpretation sheet format.
8. Participation in blind scoring of sleep studies and comparison with faculty reader
9. Review of rapid eye movement sleep apnea – What are the distinguishing features and what is the best management approach.
10. Electronic Medical Record training
11. Fatigue/sleep loss training
12. Participation in community support groups

### **INSTITUTIONAL POLICIES**

#### **GRIEVANCE POLICY FOR RESIDENTS -**

<http://medicine.missouri.edu/gme/uploads/GME-09---Grievance-Policy-for-Residents.pdf>.

### **REQUIRED ACLS/BLS**

All residents/fellows who have direct contact with patients must maintain active certification in **ACLS** and **BLS**. This includes all training programs in the University of Missouri with the exception of Pathology.

More information can be found at:

<http://medicine.missouri.edu/gme/uploads/GME-17---BLS,ACLS,-and-PALS-Certification.pdf>

### **IMMUNIZATION POLICY**

<http://medicine.missouri.edu/gme/policies.html>

### **LICENSURE**

#### **Temporary Licensure and Controlled Substances Numbers**

The fellowship coordinator provides assistance in obtaining and renewing temporary Missouri Medical, Bureau of Narcotics and Dangerous Drugs (BNDD). These licenses expire yearly on June 30. University Hospital and Clinics will provide you training DEA license. Renewal information is mailed to each trainee holding temporary licenses in February of each year. The originals of these licenses are kept on file in the Residency Coordinator's Office.

### **Permanent Licensure and Controlled Substances Numbers**

If the trainee desires to hold a permanent Missouri Medical license, they must pursue this process on his or her own. To obtain a license application, please contact the Missouri Board of Healing Arts at 1-573-751-0098.

To be eligible for a permanent license, a physician must pass Part III of the National Board of Medical Examiners examination, Steps I, II, and III of the United States Medical Licensing Examination of Federal Licensing Examination, Component I (FLEX). The individual physician pays the fee for a permanent license.

Physicians who obtain a permanent license must supply the House Staff Program office and the VA Medical Services office with a photocopy of their license.

It is highly encouraged that if a trainee holds a permanent medical license that they also hold a permanent BNDD and DEA license.

To obtain a BNDD (Bureau of Narcotics and Dangerous Drugs) number from the State of Missouri: call (573) 751-6323 or 751-6329. To obtain a DEA (Drug Enforcement Administration) number from the federal government; call St. Louis (314) 425-3241.

**The House Staff Program office needs to be notified of the house officer's permanent BNDD and DEA numbers if they are obtained.**

### **MALPRACTICE INSURANCE**

Residents and/or fellows have malpractice insurance coverage with their "home" training institution. Therefore, resident or fellow physicians from other institutions who are taking a rotation at the University of Missouri continue to be covered by their own institution. Fellow physicians from the University of Missouri who elect to take a rotation elsewhere will continue to be covered by the University's malpractice insurance program. However, specific agreements may be necessary before rotations elsewhere can be arranged. Fellows are advised to allow 6-8 months for such arrangements. Questions regarding this policy should be directed to the Risk Management office (882-1181) at the University Hospital.

### **RISK MANAGEMENT**

Details in house staff manual at <http://medicine.missouri.edu/gme/uploads/Risk-Management-Services.pdf>.

Any questions regarding reporting of incidents or occurrences should be directed to the Risk Management Coordinator at 882-1181 and the Director of the Neurology Residency Program at 882-3135. The University of Missouri Self Insurance Plan for Professional Liability requires that all persons covered by the University of Missouri Malpractice Insurance Program personally report, in a timely manner, all adverse occurrences where a patient has or may have sustained an injury or loss.

**FELLOW/ RESIDENT WORK HOURS AND ON-CALL FREQUENCY POLICY  
FOR THE UNIVERSITY OF MISSOURI**

<http://medicine.missouri.edu/gme/uploads/GME-04---Duty-Hour-Policy.pdf>

**PROFESSIONAL ASSISTANCE POLICY** information can be found at  
<http://medicine.missouri.edu/gme/uploads/GME-14---Professional-Assistance-Policy.pdf>.

**SUBSTANCE ABUSE AND IMPAIRED PHYSICIAN POLICY  
UNIVERSITY OF MISSOURI-COLUMBIA SCHOOL OF MEDICINE**

Found at

<http://medicine.missouri.edu/gme/docs/policies/general/ProfessionalAssistancePolicyPolicyfinal.pdf>

**AUTOPSY PROCEDURES**

Refer to <http://medicine.missouri.edu/gme/uploads/Organ-Donation-&-Autopsy.pdf>.

**Infection control policy can be found at**  
<http://medicine.missouri.edu/gme/uploads/Infection-Control.pdf>.

**ANTHRAX-PROTOCOL FOR HANDLING POSSIBLE  
EXPOSURE SITUATIONS**

This document was prepared to assist clinicians in making decisions as to who should receive treatment or preventative therapy after documented or possible exposure to anthrax.

**Assessment of Individual Risk of Exposure**

It is important to assess the nature of the possible exposure to anthrax. Factors that need to be assessed include the credibility of the exposure and whether the exposure might result in inhalation anthrax or cutaneous anthrax.

**Credibility**

The potential that a true exposure to anthrax has occurred is higher when:

- There is a distinct threatening message with the powder or substance.
- A suspicious letter or package is involved.
- The substance is brown or sandy brown rather than stark white.

Situations with a lower credibility for the presence of anthrax include situations in which powder is found without a note or a situation in which a white powder comes in an envelope with expected mail that is easy to trace to the sending source.

## **Route of Potential Exposure**

Inhalational Anthrax generally requires a large dose of a fine powder— particles 1-5 microns in size, a size necessary to get into the alveoli. It is technologically very difficult to dispense anthrax into particles this size. Thus the immediate risk to people “exposed” to letters or packages is small in the absence of aerosolization of the powder. Inhalational anthrax would be of concern if: a) a person got a face full of fine powder with heavy contamination of eyes, nose, and throat; b) there was real concern of aerosolization based on a warning that an air handling system is contaminated or warning that a biological agent was released in a public place.

Cutaneous Anthrax appears to require lower doses and is the most likely form of anthrax that could be caused by anthrax-contaminated letters and packages that did not have an obvious aerosolizing device. This is the likely route of exposure for the recent cutaneous anthrax cases in New York City. Given its characteristic clinical presentation and excellent prognosis if recognized early and treated, potential exposure can be managed by observation for the development of a suggestive skin lesion and prompt treatment as clinically needed. Reference: Giuliani RW, Cohen, NL: Alert: Cutaneous Anthrax in New York City. The City of NY, DOH Oct.15,2001.

## **Risk-based Medical Management of Possible Exposures**

### **Low-credibility exposure situations and situations with possible cutaneous exposure.**

If no clear-cut exposure, provide reassurance to the patient about the rarity of infection without known exposures. We do not recommend collecting a nasal swab or blood for a serologic test to confirm that there is no exposure to anthrax.

If the only potential exposure to a powder/suspicious substance is cutaneous (the most likely route of exposure after finding powder on a surface, or opening a letter with powder in it), provide advice on what to look for (red spot->papule->vesicle->black center over several days to a week), reassure the patient that cutaneous anthrax can be readily diagnosed and treated. We do not recommend collecting a nasal swab or blood for serology in the absence of a skin lesion.

### **High-credibility exposure situations**

If the situation suggests a true potential for inhalation exposure (e.g., a face and nose full of powder from a highly suspicious situation), consider starting preventative therapy until anthrax has been ruled out. A nasal swab might be helpful if powder was not available for testing.

If the situation suggests a true potential for cutaneous exposure (e.g., hand contact with powder in an envelope with a threatening note or with an envelope or package that is known to contain anthrax), provide reassurance and counseling about the signs and symptoms of cutaneous anthrax and only start treatment if a suspicious lesion develops.

### **Nasal swabs**

There is no screening test available for the detection of anthrax infection in an asymptomatic person. In general, use of nasal swabs to evaluate an anthrax threat is discouraged. Their use in recent investigations in Florida, NY, and Washington has been for epidemiologic purposes only, in order to determine who was at highest risk of exposure in situations in the setting of a confirmed case. The results have been used to guide further investigation and to determine the source of exposure, not which individuals should be given preventative therapy. The sensitivity and specificity and clinical value of nasal testing are unknown.

The one exception where nasal swabs may be useful, is in the situation where there is a highly credible exposure potential and there is no discrete environmental source to test (e.g., the person who got a “blast” of powder in the face) — and the powder was cleaned up before there was any police/FBI involvement and was subsequently irretrievable for laboratory testing.

### **Avoid prescribing unnecessary antibiotics**

We strongly urge physicians NOT to prescribe prophylactic antibiotics for the general public. Use of prophylactic antibiotics is not without risk. Inappropriate use will lead to increased antibiotic resistance among organisms causing common infections such as otitis media and pneumonia. It may also result in causing serious adverse effects such as C. Duff. Colitis, allergic reactions, interactions with other medications. Please do not prescribe antibiotics for patients to stockpile. This practice could lead to inappropriate patient decisions to self-medicate, incomplete courses of antibiotics that might select for resistant organisms, the eventual use of expired medications, & to the depletion of national supplies for medically indicated uses.

### **PARKING**

Information can be found at <http://medicine.missouri.edu/gme/uploads/Parking.pdf>.

### **MEDICAL STAFF RULES AND REGULATIONS UNIVERSITY HOSPITAL & CLINICS**

A complete list of resources can be found at <http://medicine.missouri.edu/gme/house-staff-manual.html>.

These Rules and Regulations so written shall constitute the basis of medical policy at the University Hospital and Clinics. They supersede all other Rules and Regulations previously written and must conform to policy as established by the Medical Staff Bylaws of the University Hospitals and clinics. While Sleep medicine does not have an inpatient admitting service, the regulations are listed for general information.

#### **I. Rules and Regulations Relating to Patient Care**

- A. All patients admitted to UHC must be under the direct supervision of a member of the Active, Courtesy or Honorary Staff.
- B. Admission except in an emergency will be effected only after a provisional diagnosis explaining the reason for admission is provided.

- C. Care provided to patients shall be provided by or under the active supervision of an attending physician with privileges in the clinical service to which the patient is admitted.
- D. A thorough history and physical examination shall be present in the medical record within twenty-four (24) hours after admission.
- E. The attending physician must directly supervise the activities leading to the diagnosis and treatment of the patient. He will make rounds on his patients and review medical records at frequent intervals.
- F. A Patient Bill of Rights, drafted with Medical Staff input, will be presented to patients at the time of admission.
- G. The patient will be informed who his attending physician and house officers are, & will be given an explanation of the functions of other health care personnel.
- H. Reasonable efforts shall be made to assure the protection of patients and personnel from a patient who is a source of infection or dangerous from any cause whatsoever.
- I. Infectious disease will be reported in compliance with State Law.
- J. Patients will be allowed to smoke only as outlined in the Hospitals' policy on smoking.
- K. Consultation is encouraged for the maintenance of high standards of patient care, professional accomplishment and education. Consults should be answered, written and signed without undue delay. If the circumstances are such that a delay is necessary, a brief note should be recorded in the medical record pending completion of the consult request.
- L. A surgical procedure shall be performed only with informed consent of the patient or his legal guardian, except in an emergency. The patient shall be informed of the surgeons performing the operation.
- M. Operative notes shall be written in the progress note section of the chart after each operative procedure. The written operative note shall not only indicate what was done, but shall also list pertinent findings. A complete operative report shall be dictated as soon as possible after each operation-24 to 48 hours in most instances.
- N. Anesthesia shall be administered only with the informed consent of the patient or his legal guardian, except in an emergency.
- O. Surgical procedures, which pose a potential hazard to the patient, shall be performed only upon the informed consent of the patient or his legal guardian, except in an emergency.
- P. In general, tissues and other objects removed at operative procedures will be sent to the Department of pathology where such examinations will be made as may be considered

necessary to arrive at a diagnosis. Reports of all such examinations shall be filed in the patient's medical record. For selected procedures, only after consultation between the Medical Staff and the Division of Anatomic Pathology, there will be specific exceptions to this requirement.

- Q. Laboratory tests that are considered to be routine will be determined by each clinical department.
- R. All orders, including routine and standing orders, shall be in writing. Standard orders may be adopted as needed by the various clinical services and divisions, but they must be individually signed. Verbal orders from a physician may be accepted, written in the medical record and signed by a Nurse Practitioner, Clinical Nurse Specialist, Registered Professional Nurse, Licensed Practical Nurse, Nurse Midwife, Registered Respiratory Therapist, Certified Respiratory Technician, Pharmacist, Physician Assistant, Physical Therapist, Occupational Therapist or Paramedic. All such orders shall be countersigned by the responsible physician within twenty-four (24) hours. Cancellation of all existing orders will be effected on change of service.

Verbal orders may be given by an advanced practice professional for orders within approved collaborative practice agreements/protocols. Such verbal orders may be accepted and written in the medical record by registered nurses, licensed practical nurses, occupational therapists, pharmacists, physical therapist, and respiratory therapists. All such orders must be countersigned by the advanced practice professional within 24 hours.

- S. Automatic drug stop orders are permissible. The mechanisms will be specified by the Committee on Pharmacy and Therapeutics and Nursing Services. The prescribing physician will be notified of the impending termination of a medication order before such an order is automatically stopped. Stop orders do not apply if the medication is ordered for a specified time.
- I. Blood and blood components must be signed for by a physician or Registered Professional Nurse.
- U. Discharge notes should include: (1) chief complaint, diagnosis. (2) Pertinent laboratory and radiographic results, (3) treatment including operations, (4) course and results of treatment, (5) condition of patient at discharge, (6) discharge medications, and (7) physical activities, diet and follow up care.
- V. The physician will give all patients instructions for follow-up care. This also applies to the ambulatory care and emergency services.
- W. The attending physician is responsible for assuring that a letter or discharge summary, or preferably both, go to the referring physician as soon as possible. On the ambulatory care services, the referring physician will be kept apprised of developments after the initial visit and at appropriate times.
- X. All members of the clinical staff are expected to be actively interested in securing

necropsies. No necropsy shall be performed without recorded consent of the legally authorized agent. All necropsies shall be carried out by members of the Pathology Department. Physicians seeking permission for necropsies shall explain adequately what constitutes a routine necropsy, and that the extent of the permit will no be violated. The Pathology Department shall be notified regarding exceptions in necropsy procedures so that the intent of the person giving the consent shall not be violated.

Physicians are encouraged to seek permission to perform an autopsy in all cases that meet the following criteria:

1. Unanticipated death
2. Death occurring under an experimental regime
3. Intra-operative or intra-procedural death
4. Death occurring within 48 hours following elective surgery or an invasive procedure-diagnosis
5. Death in pregnancy
6. All deaths on psychiatric service
7. Death where the cause is sufficiently obscure to delay completion of death certificate
8. Death in infants/children with congenital malformations

Y. The attending or resident physician is responsible for signing the death certificate before the body is removed from the Hospitals. A copy of the death certificate shall be made a part of the final hospital record of the patient.

Z. 'When patients are used for research purposes, the procedures must comply with federal, state and institutional regulations, including all aspects of informed consent and patient protection. This includes, but is not limited to, use of investigational drugs, materials, and/or procedures. The Institutional Review Board must approve all research on human subjects.

AA. Pregnancy terminations and surgical sterilization procedures will be performed in accordance with the laws of the State of Missouri and the United States.

BB. Access to patients shall be regarded as a privilege, and the content of the patient's medical record is privileged information. Persons desiring to interview or examine patients other than those directly involved with patient care, must obtain the permission of the resident or attending physician, the patient, and follow the hospital media policy.

CC. Medical personnel attending patients or using the patient care areas must observe appropriate dress and decorum.

DD. No alcoholic beverages or personal drugs are allowed except on specific order of the physician for specific patients.

EE. The Medical Staff will be organized for disasters and respond if needed.

FF. The Medical Staff will carry out periodic reviews of the quality of medical care as

required by the JCAHO.

- GG. In instances of suspected abuse of a child or adult patient, the procedures as outlined in the regulations of the State of Missouri will be followed.
- HH. A hospital visitors' policy will be maintained. Members of the Medical Staff will assist in the enforcement of the policy and ensure that exceptions to the policy will be held to a minimum.

II. Clinical measurements and drug doses should be recorded in the metric system.

JJ. Concerning informed consents:

- 1. Be sure that the patient is, in fact, mentally able to make an informed consent;
- 2. Tell the patient a simple, non-technical terms:
  - a. What is to be done,
  - b. What the reasonably likely risks and benefits are,
  - c. What alternatives are available;
- 3. Ensure that a written consent is signed, dated and timed, by the patient and that it acknowledges the oral explanation above.
- 4. Be present when the patient signs the written consent. This is the patient's last chance to understand what is going on and to ask questions and the physician should be there to answer and explain.
- 5. The signature on the form should be the appropriate one;
- 6. There should be no abbreviations on the consent form; and
- 7. The physician explaining the procedure should obtain date, time and sign the informed consent.

KK. The responsible physicians may write Do Not Resuscitate (DNIR) orders as per the hospital DNR policy. Decisions are made on each individual patient based on the patient's condition, prognosis, and discussion with the patient and family, when appropriate. DNIR orders are to be written on the physician's order sheet in the medical record.

LL. Any medical activities performed by House Staff in the Hospital and Clinics shall be under the supervision of a member of the Medical Staff.

MM. The use of physical or mechanical restraint of a patient, in response to psychiatric behavior, which poses a threat to injury to the patient or others, requires a written order from the physician. The order should be written as soon as possible after determination/notification of need, but within one hour of application of restraint. The order must include time limitations, but not exceed 24 hours. Reordering of restraint may be accomplished only after examination of the patient by the ordering physician.

## **II. Rules and Regulations Relating to Record Keeping**

- A. Policies of the Medical records Committee as approved by the Executive Committee will govern the rules and regulations pertaining to medical record dictation, signatures, and delinquency.
- B. Most medical records are kept electronically and shall be only accessed by the authorized physician taking care of the physician. If reviewed for administrative, QA/QI or teaching proposes, it will be so identified at the time of access to EMR. Any paper medical records are the property of the Hospitals and shall not be removed from the University Hospital and Clinics. The medical record **will** be accessible at all times to authorized staff of the Medical Record Department. Medical records may be removed from the hospital jurisdiction (UHC, mid-mo, VA) only in accordance with subpoena, court orders or statute. ‘Whenever records are moved from general circulation, the medical records department will be notified of the whereabouts.
- C. In case of readmission, available previous records shall be reviewed by the responsible physicians.
- D. Medical records of all patients shall be made available to members of the attending staff for study and research, consistently preserving the confidentiality of personal information concerning individual patients.
- E. Patients who desire to see their medical record may do so with the permission of an appropriate member of the Medical Staff. Refusal of permission shall be made when the physician determines it is not in the therapeutic interest of the patient. The physician will provide an explanation to the patient if permission to see their medical record is refused.
- F. The attending physician shall be responsible for the preparation of a complete and accurate medical record for each patient. All procedures will be recorded in the patient’s EM record.
- G. Members of the House Staff may write patient care orders.
- H. In general, there should be daily progress notes in the medical record. In situations where the condition is static and the patient is not seriously ill, progress notes may be written every three- (3) days. This is the minimum expectation.
- I. There will be no abbreviations on operative consents.
- J. Abbreviations in the medical record will not be used except for those noted in the approved abbreviation list of the Medical Staff
- K. Corrections to the medical record should consist of a line through the material with a notation “error” and, the date initials of the corrector.

- L. Charts will be considered delinquent in the face sheet dictated discharge summary and operative notes are not signed within thirty (30) days after discharge.
- M. Autopsy cases will be completed within sixty (60) days of expiration.
- N. When a patient leaves the Hospital against medical advice, the resident physician and the attending physician should be notified and there should be notes in the medical record by the physician explaining the situation.
- O. In general, use of patient medical record should be limited to:
  - 1. Use by the attending physician and house officer who are or have been in the past responsible for the patient's care.
  - 2. Use by consulting physician;
  - 3. Use for automated data processing of designated information;
  - 4. Be present when the patient signs the written consent. This is the patient's last chance to understand what is going on and to ask questions and the physician should be there to answer and explain.
  - 5. The signature on the form should be the appropriate one;
  - 6. There should be no abbreviations on the consent form; and
  - 7. The physician explaining the procedure should obtain date, time, and sign the informed consent.
  - 8. Use for fee verification;
  - 9. Use for patient care evaluation studies such as retrospective review and Medical Staff monitoring functions;
  - 10. Use for departmental review;
  - 11. Use for official surveys with accrediting, regulatory & licensing agencies;
  - 12. Use for educational purposes & institutionally approved research programs
  - 13. Use of the Chief of Staff in response to inquiry; and
  - 14. Use for infection control activities.
- P. The Medical Records Department is not authorized to give information over the phone. Request for medical records from staff physicians whose role in the patient's case is not readily apparent to medical record personnel will be referred to the last attending physician for his approval.
- Q. In the event a Medical Staff member dies or is permanently or protractedly absent, the Chief of Staff may declare a medical record complete if it is complete except for the absent Medical Staff member's signature. When a Medical Staff member is temporarily absent, a medical record may be completed for him by another Medical Staff member who is familiar with the patient.
- R. Discharge summaries shall be dictated at the time of, or as soon as possible, (usually within one working day) after discharge.

### **III. Rules and Regulations Relating to Administrative Functions**

- A. The Rules and Regulations of the Medical Staff must conform to the Bylaws of the Medical Staff and must be approved by the Executive Committee and the Medical Staff at a general meeting.
- B. Individual staff members may initiate suggested changes in the Rules and Regulations, the Executive Committee of the House Staff Organization and the Executive Committee.
- C. Policies proposed by the standing committees of the Medical Staff when approved by the Executive Committee will be binding on the members of the medical staff
- D. Failure of physicians to comply with the Rules and Regulations makes them subject to disciplinary action.

### **DEPARTMENT SUPPORT FOR THE FELLOW**

#### **ORIENTATION**

All new residents/ fellows are required to attend the orientation sessions provided by the University Hospital as well as by Harry S. Truman Memorial Veterans Affairs Hospital prior to beginning their training.

#### **FACULTY MENTOR**

Each fellow is assigned a faculty mentor/advisor to help their development throughout their training. They can discuss day-to-day or other issues with their mentor. This is in addition to the performance evaluation & semi-annual review with the Program Director.

#### **FELLOW FILE**

A fellow file will contain the biographical data, medical licenses, DEA certificate, BNDD certificate, current ACLS certificate, evaluation forms, and any correspondence with the fellow. It also contains information regarding leave/vacation. This file is kept in the coordinator's office & is available for review.

#### **FINANCIAL SUPPORT FOR RESIDENTS/ FELLOWS**

In addition to salary and benefits as offered by the University Of Missouri School Of Medicine to all residents & fellows (salary structure based on PGY year), the Department will also provides \$400.00 per year for purchases of books and journals. Furthermore, the Department will pay the cost for sending the fellow to one national meeting. If a fellow submits an abstract that is accepted for presentation, the Department will also pay for the travel cost to attend this meeting. Funding is provided for registration, airfare, room, and meals). Airfare is arranged through the

residency coordinator such that it can be purchased in advance at a reasonable cost. All receipts and bills for travel, meals, lodging, and registration are given to the administrative office in order to obtain reimbursement (\$1000 maximum).

#### **FINANCIAL ADVICE/COUNSELING RESOURCES**

University of Missouri - Columbia  
Medical School Financial Aid Coordinator  
MA202 Medical Science Building 882-2923

#### **FINANCIAL/COUNSELING ORGANIZATIONS - LOCAL**

A G Edwards & Sons Inc  
2100 Forum Blvd Columbia 445-7088

American Express Financial  
1316 Old Highway 63 S Columbia 499-4945

American Express Financial Advisors  
601 Nifong Columbia 499-4880

American Express Financial Advisors Inc.  
2710 Forum Blvd Columbia 446-2744

American Tax Service  
311A Bernadette Dr Columbia 445-8364

David Banks, CFP  
2611 Luan Ct Columbia 445-4308

Boone County National Bank  
Columbia 874-8490

Boone County National Bank Investor Services  
Columbia 874-8446

Alan Bunch, LUTCF  
Principal Financial Group  
401 Vandiver Dr Columbia 443-3535

Cambria Financial Management Inc  
Columbia 817-3180

Casey and Company LLC CPAs  
1 E Broadway Columbia 442-8427

Consumer Credit Counseling Services of Mid-America  
(Staffed, in part, by MU Department of Consumer and Family Economics Students)  
205 E. Ash, Columbia 443-0303

Dollar-Kuretich Doris Financial Advisor 116 S Jefferson	581-5994
Finance World 601 Business Loop 70W Columbia	815-9700
Financial Architects, Inc 1000 W Nifong Blvd Columbia	443-3183
Fundbuilder 4818 Santana Cir Columbia	815-1055
Kammerich Financial Services 1951 Boone Village Plaza Suite D Boonville	660-882-7620
Thomas Lightfoot 1414 Rangeline Columbia	874-3888
Lincoln Financial Advisors 601 E Broadway Suite 304 Columbia	443-1654
Merrill Lynch 2804 Forum Blvd Suite 2 Columbia	800-937-0948 446-7023
Mita Financial Services 1961 Hirst Dr	660-263-8096
Money Concepts Financial Planning Center 217 E Jackson Mexico	581-4313
Northwestern Mutual Life The Peter W. Graff District Agency 1900 North Providence Rd Suite 307	449-2488
Nova Financial 811 Cherry St Columbia	874-0434
Principal Financial Group Betty Schuster, CFP 401 Vandiver Dr., Columbia	443-0389
Professional Planning Group Christine Marks, CLLJ, ChFC 108 E. Green Meadows, Rd. Suite 7 Columbia	443-8628
Sims & Associates Insurance & Financial Services 4818 Santana Cir Suite B Columbia	874-4494
Waddell & Reed Inc 1900 North Providence Rd Columbia	875-4494

## **OTHER COUNSELING SERVICES**

Employee Assistance Program	882-6701
University Physicians Psychiatry Clinic	882-2511

## **GRANTS AND CONTRACTS OFFICE OF MEDICAL RESEARCH/IRB**

The School of Medicine's Grants and Contract Office is responsible for the review of all applications for sponsored educational and research activities. The office reviews budgets and establishes that proposals meet University administrative policies and agency guidelines. Appropriate signatures are applied before submission to the funding agency or forwarding to campus for final approval. Fiscal reporting on all grants and contracts also is the responsibility of this office. Grant applications must be submitted to this office four working days before donor receipt deadline.

### **Direct inquiries to:**

Manager, Grants and Contracts  
H337 Hadley Hall  
(573) 882-7986  
**Fax:** [573] 8844196

Funding Sources and Research Collaboration  
MA204 Medical Sciences Building (573) 882-2841  
Fax: [573] 884-4808

## **RESEARCH RESOURCES, MU HEALTH CARE**

Animal Care and Use Committee	(573) 884-6758
Biostatistics/Research Support & Development Group	(573) 882-1445
Cell and Immunobiology Core	(573) 882-2210
Clinical Trials, Ellis Fischel Cancer Center	(573) 882-4979
Computing and Internet Resources for MU Health Care Faculty	(573) 882-8428
Creative Services	(573) 882-3673
DNA Core Facility	(573) 882-4133
Electron Microscopy Core Facility	(573) 882-4777
External Funding Assistance	(573) 884-6417
ITS/Research Support and Development Group	(573) 884-7717

Biostatistics	(573) 882-1445
Institutional Review Board - IRB Training On-line	(573) 882-3181
Institutional Biosafety	(573) 882-4789
J. Otto Lottes Library	(573) 882-7033
Laboratory Animal Medicine	(573) 882-8485
Medical School Audio Visual Services	(573) 882-6919
Molecular Cytology Core Facility	(573) 882-4712
Office of Research University of Missouri-Columbia	(573) 882-9500
Office of Medical Research School of Medicine	(573) 882-2841
Barbara Montgomery E-mail: <a href="mailto:montcomervb@health.missouri.edu">montcomervb@health.missouri.edu</a>	(573) 814-1410
Grants and Contracts School of Medicine	(573) 882-5637
Office of Clinical Research Susan Koenig, Director E-mail: <a href="mailto:ClinicalResearch@health.missouri.edu">ClinicalResearch@health.missouri.edu</a>	(573) 882-4759
Office of Clinical Research - Operations Group	(573) 882-4759
Office of Technology and Special Projects	(573) 882-2821
Pharmacy Services (IDS)	(573) 882-8700
Protein Biotechnology Core Facility	(573) 882-2027
Radiation Safety Committee	(573) 882-7955
Research Animal Diagnostic and Investigative Lab	(573) 882-5983
Research Council — Student Research Fellowships, the Student Research Day, The Research Newsletter and Colloquium	(573) 882-2841
Transgenic Animal Core Facility	(573) 884-6384
VA Research Service	(573) 443-2511 Ext 6455

## **ADDITIONAL INFORMATION FOR FURTHER TRAINING**

In summary, Sleep Medicine is an expanding discipline with many newer diagnostic techniques and several more therapeutic opportunities. Newer treatments of sleep disorders are emerging with exponential expansion of knowledge in Sleep Medicine. You will have the opportunity to be exposed to many these areas both by visiting with faculty, listening to guest presentations in Grand Rounds, attending national meetings and reviewing national journals.

All through this journey, we are here to help you and guide you as you consider future opportunities in Sleep Medicine. We want you to be the best Sleep medicine physician that you can be.

Best Wishes,

Pradeep K. Sahota, M.D., F.A.A.N., F.A.A.S.M., F.A.E.S.  
Director, Sleep Medicine fellowship program  
Professor and Chairman, Department of Neurology

And

Faculty and Staff of Sleep Medicine program