



**SPECIAL
POINTS OF
INTEREST:**

- **Coordinator's
Corner p.5**

**INSIDE THIS
ISSUE:**

- Systems-based Practice 2**
- QI Projects 3**
- Duty Hours 4**
- Coordinator's Corner 5**
- Calendar 6**

Sleepiness in Residents: A cause for concern or room for improvement.

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Sleepiness, alertness, and fatigue among hospital housestaff

"All patients have the right to expect medical care from a healthy, alert, responsible, and responsive physician" ... this statement forwarded in January of 1994 by the American College of Surgeons, and last re-approved in 2000, has major implications in the practice of contemporary medicine in the hospital environment.

Recently, society has emphasized the recognition of sleepiness and fatigue among hospital housestaff. Several medical-practice accidents have triggered the recognition of the sleepiness prevalence issue among trainees, which may challenge the quality of health care provided to our patients. (Libby Zion, NYC) Furthermore, the Institute of Medicine (IOM) has submitted to Congress recommendations for tighter restrictions and supervision that will undoubtedly affect residents' medical training. (NEJM, Dec 2008)

In our institution the UT GME office champions the protection of adequate sleep schedules and practice among our trainees.

Is there a test for sleepiness?

There is no perfect test for the evaluation of sleepiness but in studies using the Epworth Sleepiness Scale (ESS)

levels of sleepiness similar to those observed in untreated patients with obstructive sleep apnea (OSA) have been found in unrecovered housestaff. We know the important deleterious results (decreased alertness, increased automobile accidents, and decreased memory) of lacking refreshing sleep in patients with OSA. We should not impose similar results on our residents taking care of our sick and vulnerable.

What causes sleepiness among the housestaff?

Sleepiness among the housestaff is most certainly multifactorial. *Insufficient sleep* due to on-call work with inadequate sleep recovery, the associated sleep interruptions (*fragmented sleep*) due to pagers or phone calls, and the *circadian rhythm* disruption consequence of night float and rotating shifts may all contribute significantly to residents' sleep disruption. Additionally, residents may or may not have a primary sleep disorder like obstructive sleep apnea or other movement disorder during sleep.

Housestaff must remember that sleep is a vital function necessary for normal biology just like hunger and thirst. Such unmet needs must be fulfilled.

Safety related consequences of sleepiness and fatigue

Inadequately rested residents are reported to have higher incidences of near-crash driving events. The majority of these situations usually occur after completion of a busy night shift. Exposure to blood-borne pathogens from accidental needle-stick incidents are also increased between 10 p.m. and 6 a.m. Concentration and judgment are disturbed after unrecovered sleep deprivation. Furthermore, "learning" stops after 13 hours of continuous work and resident behavior switches from learning to survival mood. Continuous work by a sleep deprived resident may become unproductive and risky for patients and health care providers alike.

How to recognize sleepiness of warning signs

Program Directors, residents, coordinators, and other healthcare employees should all work as a team to help identify a situation in which a resident is becoming sleepy or fatigued. Falling asleep during an interesting conference or in rounds, feeling restless and irritable with staff or colleagues,

(continued on page 4)

SMA Conference

February 18, 2009

7:30-3:30

SAC

The Southern Medical Association presents the annual practice management seminar to all junior and senior residents. The seminar will focus on presenting tips to run a practice and for making career decisions. Jean Edwards Holt, MD, MHA and Sarah Freymann Fontenot, JD, RN will lead the seminar and present the following topics: current trends in healthcare, employment and managed care contracts, finances, fraud and abuse, running your office, quality of practice, and the future of medicine.

Are You Competent in the Competencies?

Systems-Based Practice

According to ACGME all residents are expected to achieve competence in six major areas before they can complete residency. These major areas include patient care, medical knowledge, practice based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Each of these areas is essential for providing optimal care for patients.

ACGME defines systems-based practice (SBP) as "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."¹ This interdependency between the health care system and the physician's own practice encompasses a wide range of components including HIPAA, cost-benefit analysis, practice management, healthcare delivery systems, medical legal issues, system resources, health care economics, etc. Residents must also be competent in identifying system errors and developing strategies to correct them in order to provide the best patient care. Ultimately, systems-based practice is "the use of healthcare services for patient care, and how the costs of providing those services can affect the delivery of care."²

With the curriculum slam packed with a myriad of knowledge, skills, and attitudes, how do program directors and faculty fit all the necessary knowledge into the busy schedule? One avenue to address systems-based practice topics is to imple-

ment a series of patient safety, performance and quality improvement projects in which the residents are actively involved. Other teaching methods include a M & M conference, small group discussions, discharge planning sessions, patient relations sessions, patient safety committees, hospital outreach programs, root cause analysis committees, formal didactic sessions, etc.

Now that SBP is being taught, how do programs evaluate resident's competence? ACGME suggests the best evaluation method is the 360 degree evaluation followed by a portfolio. The 360 is best if used to evaluate the resident's understanding of the interaction between their practice and the healthcare system, of cost effective care, and patient advocacy. The portfolio is useful in evaluating the resident's knowledge of practice and delivery systems as well as all aspects covered by the 360. By achieving competence in systems-based practice the resident will be ready to perform the role of care coordinator, system consultant, resource manager, patient advocate, team coordinator, and system evaluator.

The ideals of systems-based practice also apply to the program director and faculty. It is essential that program directors and faculty members be competent in the areas of SBP because they are a major resource for resident education, and their actions have an immediate impact on the residents. By demonstrating the highest standards

of teamwork, improvement, safety, system resources, etc., they will help develop residents competent in SBP.

Program Coordinators are also held accountable for being competent in many areas of SBP. Ruth Nawotniak, MS, SUNY's general surgery program coordinator, applies the content of SBP to the coordinator's role as a "resource manager." The coordinator should demonstrate competence in the following:

1. "Awareness of and an understanding of the larger context of graduate medical education.
2. Know not only where to access websites, but also how to access websites and resources to find answers for the needs of the residency program.
3. Apply this knowledge for the improvement of the residency program."³

Competence in SBP is essential for all roles within residency programs to promote quality healthcare and positive patient outcomes.

For more information about SBP visit the ACGME Outcome Project at www.acgme.org.

1 www.acgme.org

2 Rider, Elizabeth A., MSW, MD, Nawotniak, Ruth, MS, and Smith, Gary, Ed.D. *A Practical Guide to Teaching and Assessing the ACGME Core Competencies*. Massachusetts: HCPro, 2007.

3 Nawotniak, Ruth, MS. "Professionalism and Re-defining the role of the Program Coordinator." http://medschool.ucsf.edu/gme/PPT/Ruth_Nawotniak.pps

Best Practice: Quality Improvement Projects

Many, updated Program Information Forms (PIFs), the document filled out for ACGME RRC site visits, ask programs to describe a learning activity(ies) where the residents gain competence in the following system-based practice (SBP) areas: 1) work effectively in various health care delivery settings and systems; 2) coordinate patient care within the health care system; 3) incorporate considerations of cost-containment and risk-benefit analysis in patient care; 4) advocate for quality patient care and optimal patient care systems; and 5) work in interprofessional teams to enhance patient safety and care quality. Another question calls for an activity where the resident participates in experiential learning to identify system errors.¹

So how can programs teach residents several aspects of SBP in one activity? Many SBP areas can be addressed by implementing an “active series of practice, quality, safety or performance improvement projects.”² In one project that deals with health care systems issues, residents can experience working

in interdepartmental teams acting as a leader or active participant; participate in teamwork to provide and improve safe, cost effective, high quality patient care; evaluate health care outcomes and possible system errors; analyze various health-care delivery services (i.e., resident hand-off procedures, lab studies, home health-care, rehab/therapy services, etc); and identify and solve patient related concerns. Residents also gain valuable experience in writing proposals, conducting investigations, reporting results, and proposing solutions.

In order to incorporate a QI project into the curriculum, program directors must develop step by step guidelines for the process. Many projects follow the PDSA cycle which includes planning, doing, studying, and acting. First, the resident(s)/program must identify an area in need of improvement and determine a plan of action. Next, the resident must gather data and carry out the plan. Then, the data must be analyzed and a solution proposed. Finally the solution should be carried out to determine its effectiveness. Project topics should be based on how

things are running in the hospital and how they are affecting patient care. Some examples include “Guidelines for Medical Waste Management,” “Process Analysis of MRI Under Anesthesia,” OR Case Cancellation Charges and Billing,” and “Cost Effectiveness of Routing Daily Preparation.”⁴

Through participation in quality improvement projects, residents develop a “strong commitment to making improvements in terms of excellent patient care quality and safety through the examination of health outcomes and the organization and management of healthcare systems.”⁵

Resources:

1 www.acgme.org

2 Bosshart, Donald A., Ed.D. *Analysis of Common Program Information Form Questions and Program Director Guide to the Common Program Requirements*. Savannah: Surgery and Surgical Subspecialties Conference, October 2008.

3 Rider, Elizabeth A., MSW, MD, Nawotniak, Ruth, MS, and Smith, Gary, Ed.D. *A Practical Guide to Teaching and Assessing the ACGME Core Competencies*. Massachusetts: HCPPro, 2007.

4 http://www.acgme.org/outcome/implement/rsvp_postwin06.pdf. 2/2/2009

5 Bosshart.

“The practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head.”

-Sir William Osler

(In: *Aequanimitas: With Other Addresses to Medical Students, Nurses and Practitioners of Medicine.*)

Where do I find outcome data to perform outcome improvements?????

Currently, all programs should be in Phase 3 of the ACGME Outcome Project. Programs should be in the process of using outcome data to identify areas of weakness and develop ways to improve the program. During Annual Program Evaluation meetings, program directors, faculty, and residents should assess the effectiveness of the program’s goals and objectives and the quality of the educational program. If deficiencies are identified, improvement

plans should be developed.

Where can I find outcome data?

- Results of resident, faculty, rotation, and program evaluations
- Letter of Accreditation
- Internal Review Report
- Board Pass Rates
- Duty Hour Compliance
- Research Productivity
- Performance on in-service and in-training exams
- Fellowship/Faculty Acceptance Rate
- Alumni Survey
- Match Fill Rate
- Attrition Rate
- Patient and Family Surveys
- ACGME Resident Survey Results
- Patient Care Outcomes
- Conference Attendance

ACGME Duty Hour Standards

1. Duty hours must be limited to **80 hours** per week, averaged over a four-week period, inclusive of all in-house call activities
2. Residents must be provided with **1 day in 7 free** from all educational and clinical responsibilities, averaged over a four-week period, inclusive of call. One day is defined as one continuous 24-hour period free from all clinical, educational, and administrative activities.
3. Adequate time for rest and personal activities must be provided. This should consist of a **10 hour time period** provided between all daily duty periods and after in-house call.
4. In-house call must occur no more frequently than **every third night**, averaged over a four-week period.
5. Continuous on-site duty, including in-house call, must not exceed **24 consecutive hours**. Residents may remain on duty for up to **6 additional hours** to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical and surgical care as defined in Specialty and Subspecialty Program Requirements.
6. **No new patients** may be accepted after 24 hours of continuous duty.
7. Frequency of at-home call is not subject to the every third night limitation. The hours spent in-house are counted towards the 80 hour limit.

Institutional Policy Spotlight: Duty Hours

In 2003 resident duty hour standards were established and implemented by ACGME to improve the quality of education received and patient care provided by residents. ACGME defines duty hours as all clinical and academic activities related to the residency program; i.e., patient care (both inpatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled

academic activities such as conferences. Duty hours do not include reading and preparation time spent away from the duty site. UTHSC GME's policy directly coincides with the ACGME duty hour standards.

In order for programs and GME to monitor resident compliance to the duty hour standards, all residents are required to enter duty hours into the New Innovations Residency Management System on a quarterly basis. Hours must be

logged during the months of January, April, August, and October. Program policies may require residents to report duty hours more often than quarterly.

For more information visit:

<http://www.utmem.edu/GME/policies/dutyhours2008.pdf>

Or

http://www.acgme.org/acWebsite/dutyHours/dh_Lang703.pdf

Sleepiness in Residents (Continued from page 1)

or difficulty focusing on the care of patients are all signs and symptoms that require intervention. Additional situations where resident fatigue may become an issue include residents who are constantly checking routines, residents working long hours repetitively completing the same task, and residents beginning to lack interest in patient care.

Healthy sleep habits for house staff

Residents should avoid sleep deprivation before anticipated shift work, i.e. do not start your on-call responsibility with a sleep deficiency. Develop sleep routines and enlist your family and friends to protect your sleep time (i.e., a newborn in the room is not a good idea). Get regular exercise but avoid heavy exercise or coffee within three hours of bed time. Preserve an adequate sleeping environment with comfortable temperature, a dark ambient room, and quiet surroundings.

Napping techniques

Naps only temporarily improve your alertness. Short

15-30 minutes will help to partially restore your sleep deficit. This rescue technique may be helpful if you are preparing for unavoidable procedures or driving. Longer naps will induce sleep inertia and are inadvisable. Naps will take the edge off sleepiness but will not replace adequate sleep restoration.

Drive Smart

After long shifts residents should avoid driving drowsy. As soon as the warning signs of sleep deprivation are noticed the resident should stop driving. Taking a short nap (30 min) before going home can help but not eradicate the effects of sleep deprivation. Residents must understand factors that increase the danger of drowsy driving: sedative medications, alcohol, driving long-distance or having a sleep disorder, i.e. OSA. Symptoms of driving drowsy include trouble focusing on the road, yawning, drifting lanes, having difficulty keeping your eyes open, or closing your eyes at

stop lights. Driving drowsy can expose you and others around you to the risk of crash-accidents that may be costly or even life threatening.

What does not work?

Opening the car window, chewing gum, turning the radio or slapping yourself hard in the face will not recover you from a sleep debt. Napping for 15 minutes will help. While driving drowsy, it only takes four seconds of inattention on the highway to suffer the sometimes fatal consequences of a crash.

To solve the problem of sleep deprivation and fatigue, residents and faculty must identify their own tolerance level and develop a culture of full support and shared responsibility for alertness and sleep deprivation management. The rewards of doing so will benefit you, your team, and your patients.

ACKNOWLEDGEMENTS:

Many of these concepts have been championed by the American Academy of Sleep Medicine.

Coordinator's Corner

Time Management Tips and Stress Busters for Coordinators

The January '09 Residency Program Alert published by HCPro, Inc. offers ten tips for coordinators to get organized and ready for the new year.

1. New year, new calendar: outline major responsibilities of 2009
2. Be on time with timelines: work backward from due date and set mini deadlines
3. Eliminate e-mail madness
4. Work around interruptions: divide projects into small pieces so you can work between interruptions
5. Make friends: NETWORK
6. Stay on top of your daily tasks: create daily to-do lists for small everyday jobs
7. Do away with paper stacks: make time everyday to tidy up your desk and organize paperwork
8. Open 24/7: consider allowing residents to contact you if they have an emergency even when you're not at work
9. Make a map: use a process map to lay out the big picture
10. Have fun: consider appointing a chief morale officer to keep spirits high

"Ten time management tips and stress busters."
Residency Program Alert, January 2009 Vol7
No.1: 9-10.

Congratulations!!!!

The Insider would like to congratulate the following programs on their successful ACGME site visits:

Dermatology

Continued Accreditation
3 year cycle

Hematopathology

Initial Accreditation
3 year cycle

OB/GYN

Continued Accreditation
4 year cycle

Pathology

Continued Accreditation
4 year cycle

Orthopaedic Surgery

Continued Accreditation
5 year cycle

Pediatric Orthopaedics

Continued Accreditation
5 year cycle

**Welcome!!
New Radiology
Program Director**

Eric Hutchins, MD

**New Program
Effective 7/1/2009**

Hematopathology

Program Director:
Nadeem Zafar, MD

UTHSC Facts

Where do current residents live??:

38103 (Downtown):	33%
38104 (Midtown):	8%
38111 (East Memphis):	8%
38018 (Cordova):	5%
38105 (Medical Center):	5%
38117 (East Memphis):	5%

The average age of all the residents is 31.6 years old

**Make your concerns
known!!!!**

**Confidential Resident
Comments can be made
at www.utmem.edu/GME**

The GME Insider
UTHSC Graduate Medical Education
910 Madison Ave, Suite 1031
Memphis, TN 38163



Upcoming Events (Feb-April 09)

Systems Based Lecture Series

North Auditorium, Coleman
Bldg 12-1pm
Feb 6th: Rural Medicine Alternatives
Mar 6th: Cancelled
April 3rd: Resident Town Hall

Program Coordinator's Meeting

North Auditorium, Coleman
Bldg 9-11am
March 12th
April 9th

Graduate Medical Education Committee Meeting

A101 Coleman 12-2pm
Feb 27th
March 27th
April 24th

Internal Reviews

Otolaryngology 2/13/09
Child Psychiatry 2/17/09
Pediatric Surgery 2/25/09
Thoracic Surgery 2/26/09
IM Nashville 3/13/09
Ped Orthopaedics 4/7/09
Radiology 4/7/09
Plastic Surgery 4/23/09

ACGME Site Visits

Anesthesiology 2/10/09
Dermatopathology 2/11/09

SMA Conference

February 18, 2009 7:30-3:30
SAC

Answers to Fall Edition UT Trivia

1. Longest serving PD=E. William Rosenberg (since 1967)
2. UTHSC founded in 1911
3. Oldest GME program= Psychiatry (since 1951)

*Residents are you Concerned?
Have Questions?*

DIO Open Door Policy

When: 8am-4:30pm
Where: 910 Madison Suite 1031
Who: Mary Ann Watson, DIO

Residents, Guess What???

GME has moved and wants to see you. Come see the new office and register for the Skittles Contest!!!

910 Madison Avenue
Suite 1031