



Nighttime Can Be the Right Time for Education

Pediatric Hospital Medicine 2016

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Disclosures

- We have no relevant financial relationships with the manufacturers of any commercial products and/or providers of commercial services discussed in this CME activity.
- We do not intend to discuss an unapproved/investigative use of a commercial product/device in our presentation.



Workshop Objectives

1. Discuss the barriers to teaching and learning at night
2. Describe effective teaching strategies and identify methods to overcome barriers to teaching and learning at night
3. Create site specific action plans to implement at home institutions

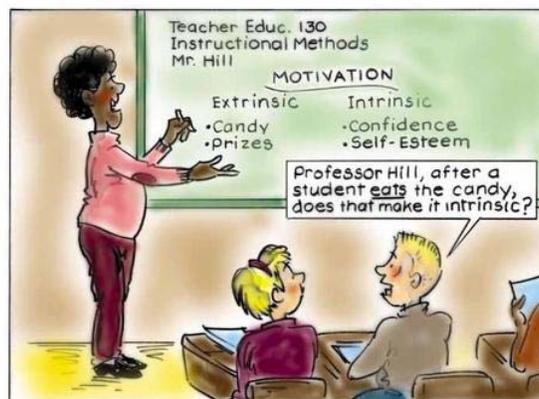


Why is teaching at night so difficult?

Barriers

- Work Load (decreased staffing at night with same amount of patients)
- Circadian Rhythm/Fatigue
- Autonomy of Residents (residents are more autonomous at night and therefore harder to get into one place)
- Nursing Clean up; many nurses like to clean up orders at night; increased pages
- Difficulty Focusing at night
- Increased Risk of Emergencies (real or perceived)
- May have to occur via phone/skype/other (Attendings may not be in house)
- Wanting to complete work so you can get some rest
- Time management
- Majority of admissions in evening
- Seniors may feel you encroaching on their teaching time
- Difficulty in coordinating a time- Attendings busy/ residents busy
- Different Learning Styles and addressing those in short time/small group

Adult Learning Theory Overview



Theory of Andragogy

- Independent and Self-Directing
- Various degrees of experience
- Integrate Learning into daily routines
- Immediate problem centered approaches
- Motivation: Internal > External

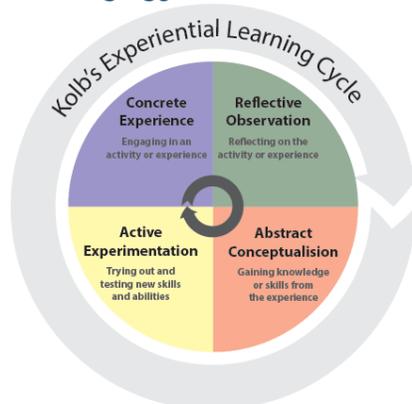
Independent and Self Directing

- Goal: Self-directed Learner
 - Employ Reflection
 - Use Relevant information
 - Build on Learner experiences
 - Small group work
 - Problem based learning
 - Open discussions on hot topics
- Needs assessments

Type of Learner	Teaching Style
Dependent Learner	Authority Expert
Interested Learner	Sales Person, Motivator
Involved Learner	Facilitator
Self-Directed Learner	Delegator

Theory of Andragogy

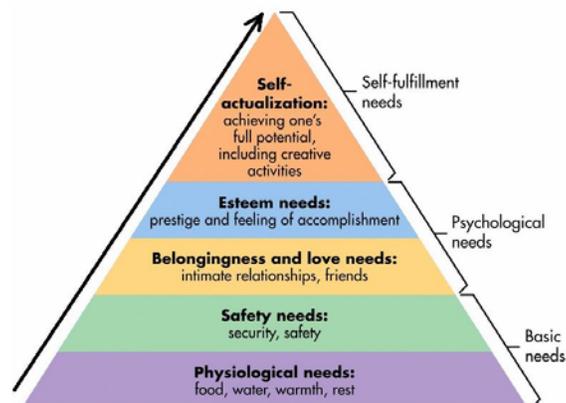
- Various degrees of experience
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- Immediate problem centered approaches



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Kolb D.A. (1984) 'Experiential Learning: experience as a source of learning and development', New Jersey: Prentice Hall

Internal > External



<http://studiosguy.com/maslows-hierarchy-of-needs/>

Internal > External

Theory Comparison	
ERG theory	Maslow's Hierarchy
Growth	Self- Actualization Needs
	Esteem Needs
Relatedness	Belonging Needs
	Love Needs
Existence	Physiologic Needs
	Safety Needs

Literature Review: Night Time Education



http://www.abc.net.au/science/news/health/HealthRepublsh_830418.htm

Why the shift to night float?



"There is a pressing need for education . . . regarding adequate sleep for maintaining optimal learning and performance among medical trainees."³

"Within our society, working around the clock is applauded as a form of dedication. It is commonly viewed as a driving force for success . . . [but] even minimal sleep loss contributes to less than stellar performances."⁷

<http://www.cbc.ca/news/health/surgeon-performance-unaffected-by-fatigue-from-overnight-work-study-1.3205534>

³ Buysse DJ et al. Sleep, Fatigue, and Medical Training: Setting an Agenda for Optimal Learning and Patient Care. *Sleep* 2003;26(2):218-25.
⁷ Prince TM and T Abel. The impact of sleep loss on hippocampal function. *Learn Mem* 2013;20(10):558-69.

Night float is not perfect

Despite a decrease in fatigue, interns experienced a decrease in overall well-being which seemed to be linked to an increase in work-load intensity.⁴

"Although the amount of supervision may be debatable, increased faculty presence is associated with higher resident satisfaction and more favorable learning experiences."⁵

<http://www.newam.quickmeme.com/new/page/1754/>

⁴ Defilippis AP, et al. On-site Night Float by Attending Physicians: A Model to Improve Resident Education and Patient Care. *J Grad Med Ed* 2010;2(1):57-61.
⁵ Haber LA, et al. Effects of Increased Overnight Supervision on Resident Education, Decision-Making, and Autonomy. *J Hosp Med* 2012;7(8): 606-10.

Improving night time education



- Increased faculty presence^{1,2,9}
- Structured night time teaching sessions^{1,2,9}
- Transforming "night float" into "nighttime education"⁶
- Focus on microteaching opportunities⁶

"Direct observation of trainees, instruction in communication, and modeling of cost-efficient medical practice may be more feasible during the night . . . To realize the potential of this educational opportunity, training programs should develop skilled nighttime educators and establish metrics to define success."⁶

<http://www.keepcalm-o-matic.co.uk/p/keep-calm-and-prepare-micro-teaching-1/>, www.bigstockphoto.com

1 Auger KA, et al. Better rested but more stressed? Evidence of the effects of work hour restrictions. *Acad Pediatr* 2012;12(4):335-43.
2 Bricker DA and RJ Markert. Night Float Teaching and Learning: Perceptions of Residents and Faculty. *J Grad Med Educ* 2010;2(2):236-41.
9 Weltz AS, et al. Strategies for Improving Education on Night-Float Rotations: A Review. *J Surg Educ* 2015;2(2):297-301.
6 Hanson JT, RG Pierce, and G Dhaliwal. The New Education Frontier: Teaching at Night. *Acad Med* 2014;89(2):215-8.

Improving night time education

Richards JB, et al. Twelve tips for overnight teaching. *Med Teach* 2014;36(3):196-200

Reflection and Preparation

1) Plan to be awake, 2) Review the census, 3) Reflect on previous overnight teaching experiences, 4) Assess your learners

Pedagogy

5) Create a learning environment, 6) Go to the bedside, 7) Reinforce mechanisms of disease, 8) Deemphasize shift mentality, 9) Support autonomy

Follow-up

10) Encourage reflection and provide feedback, 11) Keep a list of key patient and teaching points, 12) Go digital for follow-up

Practice Scenarios



http://www.bluecollaragency.com/blog/wp-content/uploads/bluecollarinteractive_practicemakesperfect.jpg

Scenario #1: Resident Self Directed Teaching

The resident teams are very busy with patient care and new admissions but, one of the admissions has Loeys-Dietz syndrome, a rare connective tissue disorder causing a wide array of symptoms. The senior does not feel adequately equipped to teach about specifics of this rare disease, but realizes it is important for both of them to have at least a basic understanding of the patients underlying disorder.

Scenario #1

What can the senior resident do to help the intern learn about the disease?

- A.) quickly read up on the case and present the main points to the intern prior to seeing the patient
- B.) take the interns pager and let them read up on his/her own and then discuss after seeing the patient
- C.) ask the parent to educate about the disease
- D.) ignore the underlying disease as they are only here for a GJ tube replacement

What resources could you use?

- A.) Up to Date
- B.) Pub Med
- C.) <https://rarediseases.info.nih.gov>

Scenario #2: In House Teaching Attendings

It is Wednesday night and you are running a nighttime teaching session about basic radiology that is important for all residents to know. You notice that the interns are not paying attention or participating as much as usual and are distracted answering pages and flipping through patient lists.

Scenario # 2

What tactics can you employ to further engage the interns?

- A. Asking them about patients they recently ordered X-rays on and discussing the findings
- B. Asking the senior to take all the pages for that 20 minutes
- C. Try and reschedule the teaching later in the night
- D. threaten to report the interns behavior to the residency program director

Scenario # 3: Over the Phone Teaching Attending

The on-call attending at home calls the senior resident to discuss overnight admissions. The senior states that they haven't admitted any new patients so far and does not seem excited to stay on the phone with the attending since there is nothing new to discuss.

Scenario # 3

How can the attending come up with a quick topic to teach the senior?

- A.) Have 4-5 easy go-to topics to teach the senior on slower nights
- B.) Ask the senior to pick a child already on the list to talk about
- C.) Use the time to provide constructive feedback
- D.) Tell the senior to call you back at an appropriate hour if they are more motivated to learn

What if the senior is busy taking care of a sick child about to be RRT'd when you call?

- A.) Ask them if they need you to come in
- B.) Ask them to call you back after they are stabilized
- C.) Keep the senior on the phone and teach anyway
- D.) Ask the intern if they understand why the patient is sick enough to be RRT'd

Small Group Discussions



<http://www.sundayschoolleader.com/category/5-weeks-of-flake/>

Large Group Discussion



<http://www.recruitmentagencynow.com/recruitment-mas-at-highest-level-in-five-years/coming-together/>

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Thank You!

- We are open for all feedback!