



Duty Hours, Fatigue and the Clinical Environment

Objectives

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- Review duty hours policies and requirements.
- Review signs of fatigue.
- Discuss ways to manage and mitigate fatigue.

Duty Hours Overview

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Averaged over 4 weeks:

- Scheduled work should not exceed 80 hours per week.
- At least one 24-hour period per week free (no educational activities or at-home call).
- House call no more frequent than every 3rd night (PGY2 and above).
 - If called in to care for patient, this time counts as part of 80-hour week.



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Duty Hours Overview

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- Maximum consecutive duty:
 - PGY1: 16 hours, no transition time.
 - PGY2+: 24 hours, up to 4 hours for transition of patient care only.
- Time beyond 24+4 WILL BE tracked by program.
 - Only for: severely ill or unstable patient; exceptional educational value, or humanistic needs of patient/family.
 - Should be infrequent at most.

Duty Hours Overview

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- Scheduled on-duty assignments must be separated by at least 8 consecutive hours (preferably 10).
 - PGY 1: should have 10 hours free and **MUST HAVE** 8 hours free between shifts.
 - PGY 2: above PLUS must have at least 14 hours free after a 24-hour shift.
 - PGY 3+: should have 8 hours free between shifts; preparation for unsupervised practice.

Duty Hours Overview

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ALL duty hours must be logged accurately and in a timely manner in New Innovations.

DUTY HOUR HOTLINE
504-599-1161

Information Needed:

- Date of violation
- Hospital name
- Program name
- Rotation name

On end of rotation review, a resident is reported to have had difficulties interacting with nurses, other residents and attendings. The resident was reported to be irritable and volatile. The resident was late on several occasions and was noted to be confused about details on several occasions. Chart reviews showed sloppy handwriting and poor documentation. This appears to be new behavior.

What is your concern?

Sleep Needs

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- Adults typically need 6-10 hours of sleep per day.
- 8 hours required for IDEAL performance.



Sleep Needs

- Less than 5 hours of sleep per day results in decline of peak mental abilities.
- Chronically sleep deprived individuals function at the 9th percentile.
- More common in shift work. Night shift greater risk than day shift.
- Sleep debt is harmful.
 - ▣ After 1 night of missed sleep, cognitive performance may decrease 25%; after 2 consecutive nights-40%.

Why is Sleep Deprivation a Problem?

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- Physicians know relatively little about sleep needs and sleep physiology.
- Culture of medicine: needing sleep=weakness.
 - Working through sleepiness is a sign of dedication?
- Most residency programs do not recognize or adequately address problem.
- Causes impairment with effects similar to being influenced by alcohol or drugs.
- No test for fatigue impairment.

Why is Sleep Deprivation a Problem?

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- No learning curve for sleep deprivation.
 - ▣ Healthcare providers do not “adapt” to functioning with sleep debt.
- Sleep needs are individualized and fixed.
- Effect: Mood > cognitive function > motor function

Fatigue and Impairment

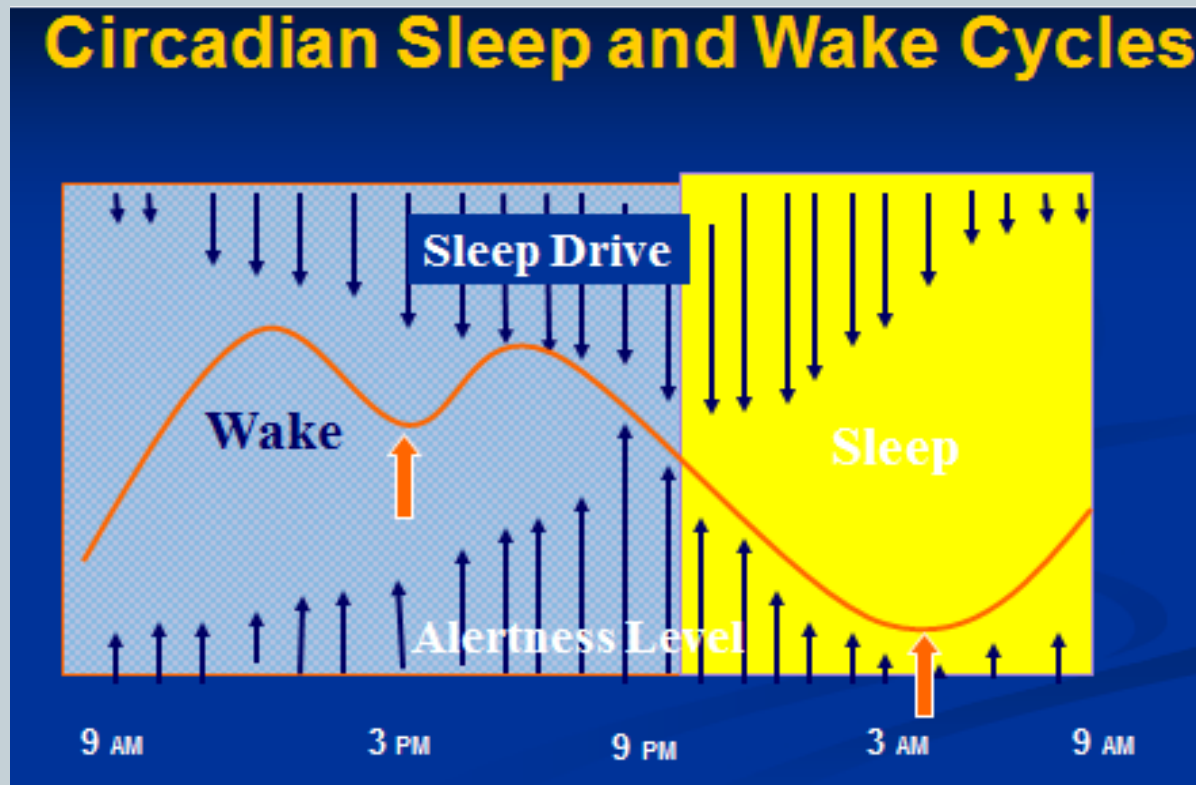
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- Low point for performance begins approximately 15-16 hours of continued wakefulness.
- The low point for alertness after wakefulness all night is between 6am and 11am.

Fatigue and Impairment

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- Typically performance errors greatest between 2-5am and/or 2-5pm.



A fourth-year surgery resident is meeting with the Surgery Department Chairman to explain his recent inability to show up in the OR at 6am in the morning for scheduled cases. The resident admits to taking a benzodiazepine as a sleeping aid and Ephedrine to stay awake during afternoon conference.

What is your concern?

Warning Signs of Fatigue

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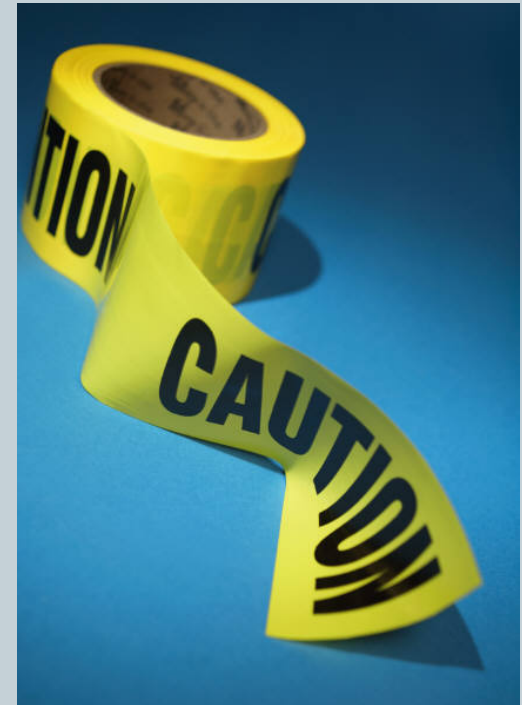
- Disturbed mood.
 - ▣ Depression
 - ▣ Anxiety
 - ▣ Labile emotions
 - ▣ Anhedonism (“I don’t care.”)
- Communication errors.
 - ▣ Charting
 - ▣ Team dysfunction
 - ▣ Family dysfunction



Warning Signs of Fatigue

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- ❑ Falling asleep in conferences or on rounds.
- ❑ Feeling restless and irritable with staff, colleagues, family and friends.
- ❑ Having to check your work repeatedly.
- ❑ Difficulty focusing on the care of patients.



Manage and Mitigate Fatigue

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- Drowsiness/sleepiness/fatigue cannot be eliminated but must be managed.
- Recognition and use of alertness strategies are simple methods to cope.
 - ▣ Bright lights, brief naps, exercise, caffeine.
- ❖ When fatigue or sleepiness interferes with performance or health, talk to your supervisors and program director.

Manage and Mitigate Fatigue

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- Adhere to ACGME requirements.
- Monitor LSUHSC and program guidelines.
- Be wary of moonlighting.

Manage and Mitigate Fatigue

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- Routine:
 - ▣ Establish pre-sleep/pre-nap routine.
 - ▣ Use relaxation techniques as sleep aid.
 - ▣ Protect sleep time.
- Environment:
 - ▣ Cooler temperature.
 - ▣ Darkness.
 - ▣ Quiet.
 - ▣ No extremes with meals prior to sleep.

Manage and Mitigate Fatigue

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- Medications?
 - Caffeine:
 - None before sleep – erodes sleep quality.
 - Strategic use during awake periods.
 - Only improves function temporarily.
 - Onset 15-30 minutes, half-life 3-7 hours.
 - Can build tolerance.
 - Stimulants – avoid use to stay awake.



Manage and Mitigate Fatigue

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- ▣ Alcohol:
 - Enhances sleep onset but disrupts stages later.
 - Magnifies fatigue and error.
- ▣ Melatonin:
 - No significant effect for shift workers.
- ▣ Benzodiazepines:
 - Impaired waking (“hangover” effect).

Summary

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- Duty hours summary:
 - ≥ 80 hours per week.
 - 1 day off-duty per week (averaged over 4 weeks).
 - PGY1: max 16 hours per day.
 - PGY2+: max 24+4, with program director permission.
- Be aware of sleep needs.
- Don't ignore warning signs of fatigue.
- When fatigue or sleepiness interferes with performance or health, talk to your supervisors and program director.

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