

AWO Coastal Committee Meeting

Las Vegas - 6/7 – 6/8/11

NORTHWESTERN UNIVERSITY STUDY

- This study addresses new data from scientific studies indicating the use of “anchor sleep” and “nap sleep” strategy

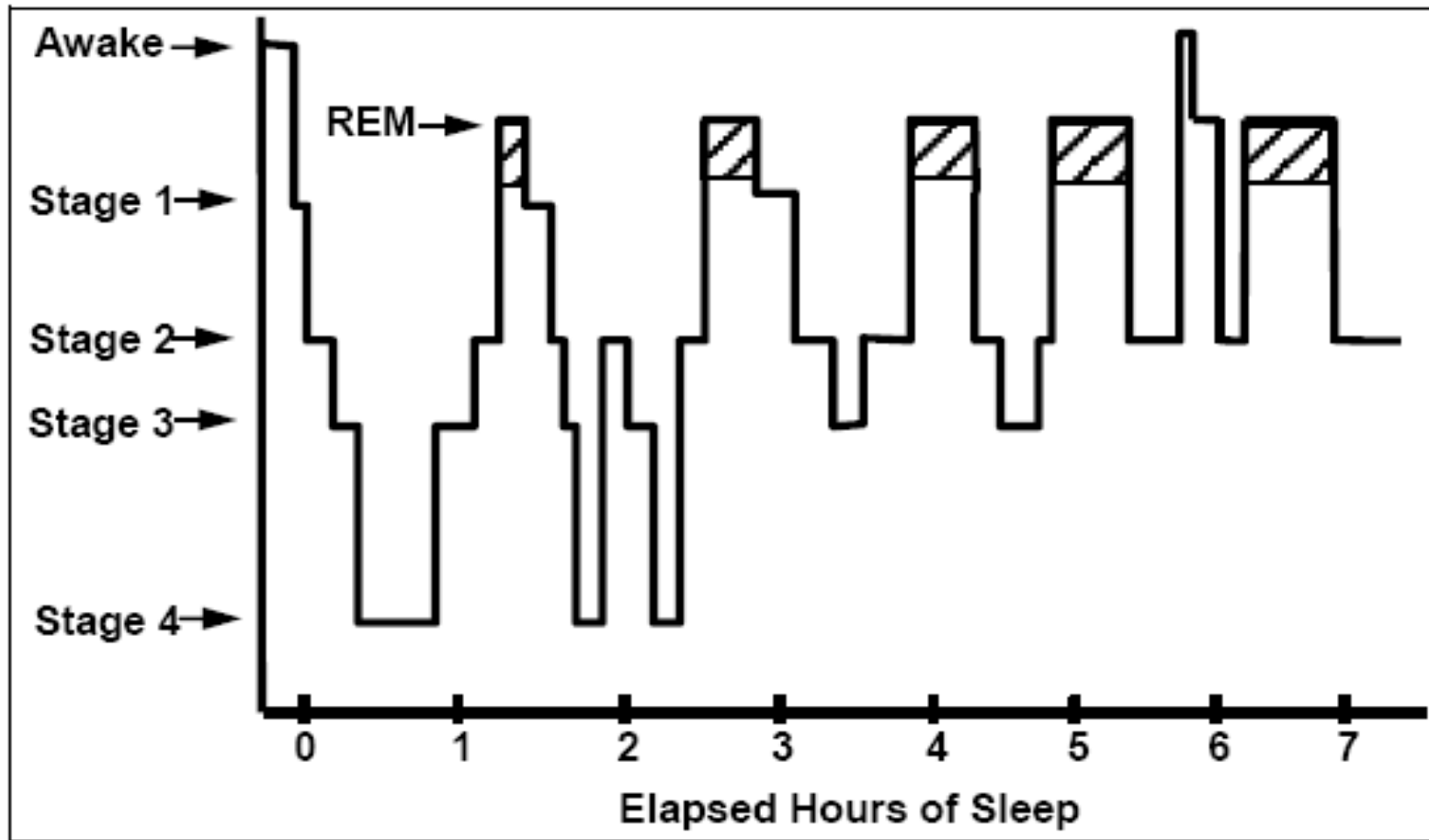
ANCHOR SLEEP

NAP SLEEP

Anchor Sleep – Primary & longest sleep period

**Nap Sleep – Shorter sleep period
(time may vary)**

Sleep Architecture



NORTHWESTERN FINDINGS

Time in bed

8 hours or more

Sleep

6.5 – 6.6 hours

***(Note – This is during a 24 hour period
– not uninterrupted time frame.)***

- **FRONT WATCH**

- Average 6.4 hrs total sleep in 24 hr period
 - Average 8.1 hrs in bed in 24 hr period
- 3.7 of these hrs during peak sleep time (0000-0600)
 - Average 4.5 hrs in bed

- **BACK WATCH**

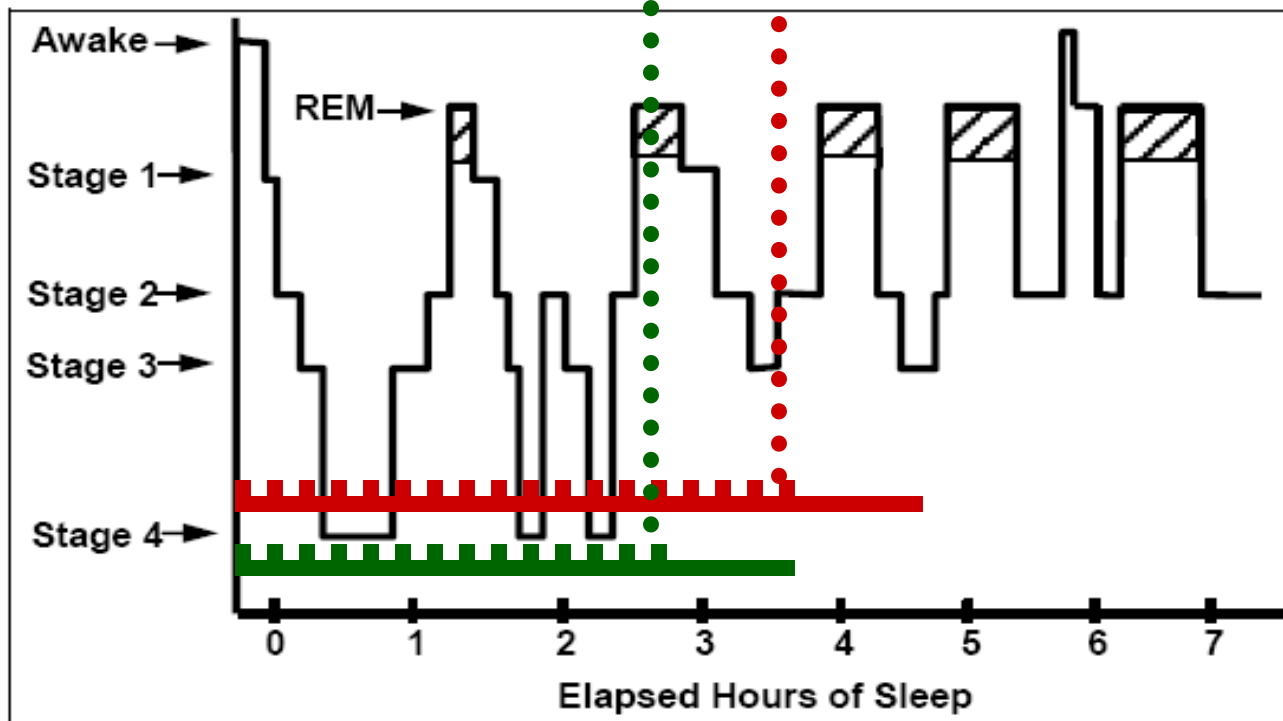
- Average 6.2 hrs total sleep in 24 hr period
 - Average 7.8 hrs in bed in 24 hr period
- 3.6 of these hrs during peak sleep time (0600-1200)
 - Average 4.4 hrs in bed

- Front Watch (Off Watch 0000 – 0600)

Sleep - 3.7 **Time in Bed - 4.5** ———

- Front Watch (Off Watch 1200 – 1800)

Sleep - 2.7 **Time in Bed - 3.6** ———

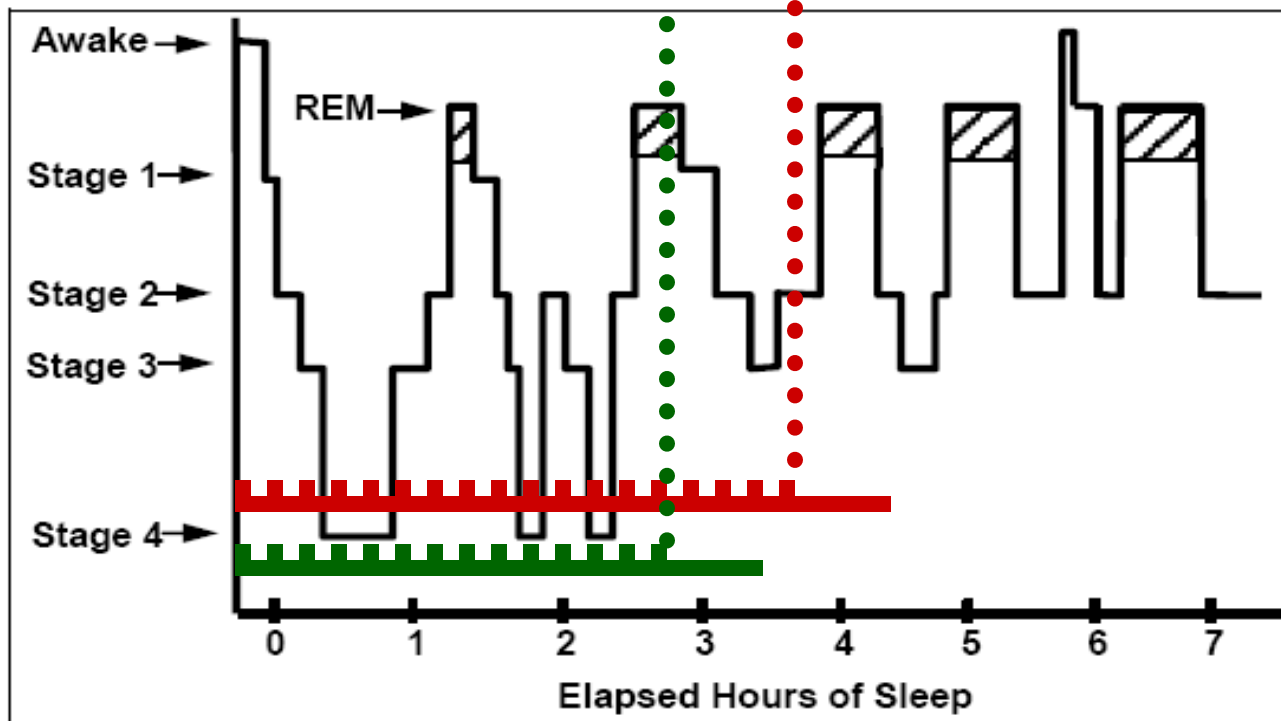


- Back Watch (Off Watch 0600 – 1200)

Sleep - 3.6 **Time in Bed - 4.4** _____

- Back Watch (Off Watch 1800 – 2400)

Sleep - 2.6 **Time in Bed - 3.4** _____



- Front Watch **(Off Watch 0000 – 0600)**

Sleep - 3.7

Time in Bed - 4.5

- Front Watch (Off Watch 1200 – 1800)

Sleep - 2.7

Time in Bed - 3.6

- Back Watch **(Off Watch 0600 – 1200)**

Sleep - 3.6

Time in Bed - 4.4

- Back Watch (Off Watch 1800 – 2400)

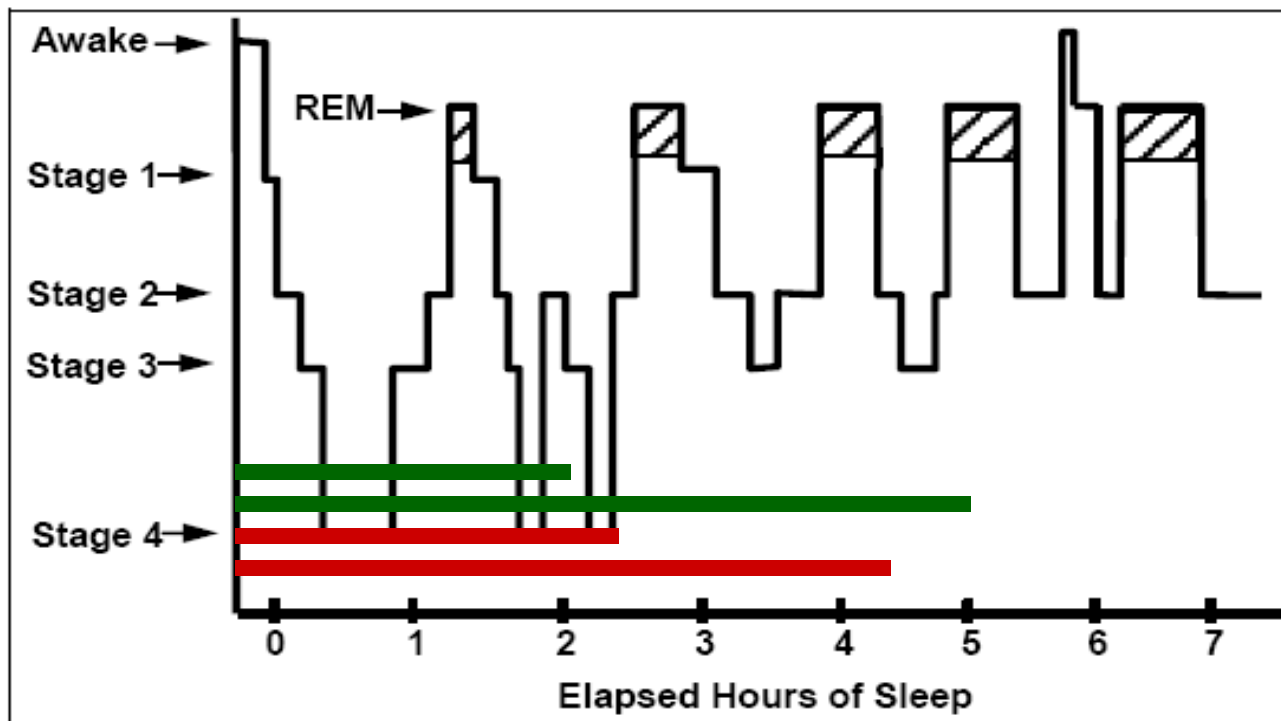
Sleep - 2.6

Time in Bed - 3.4

Additional Findings

- Very limited crew knowledge of CEMS
- Onboard educational intervention not increasing sleep time

- Would it help you to get 7 – 7.5 hours of sleep in a 24 hour period? (**4.5 + 2.5**) or (**5.0 + 2.0**)



Hmmmm...

- Why are crewmembers getting only 6.5 – 6.6 hours of sleep in a 24 hour period when they spend 8+ hours in bed?
- If you strived toward this extra 1 – 1.5 hours of sleep sometimes it would help!

SURVEY

SURVEY SAYS...

Discuss:

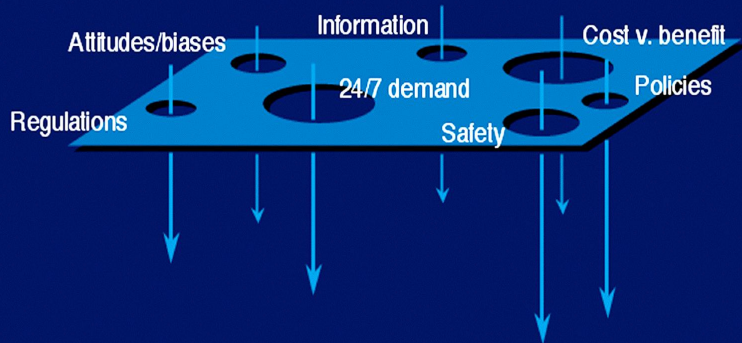
CHALLENGES

IDEAS

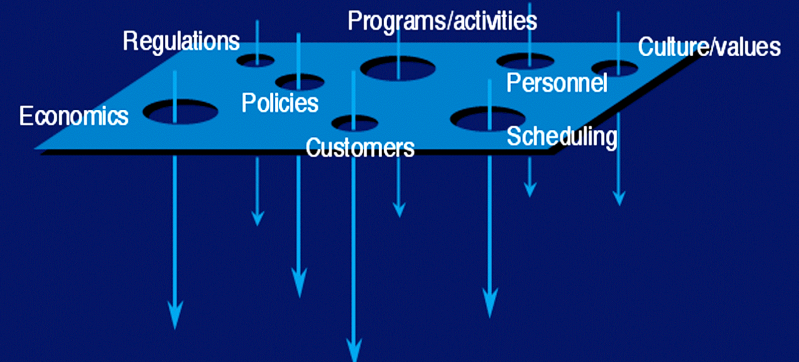
RECOMMENDATIONS

Skills associated with society, organization/corporation, operations, individual

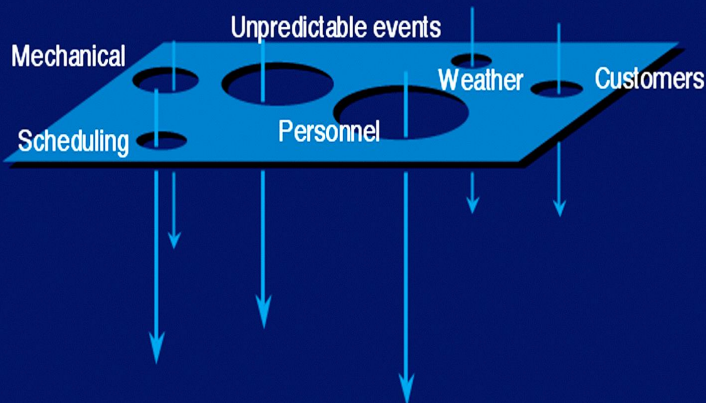
Society



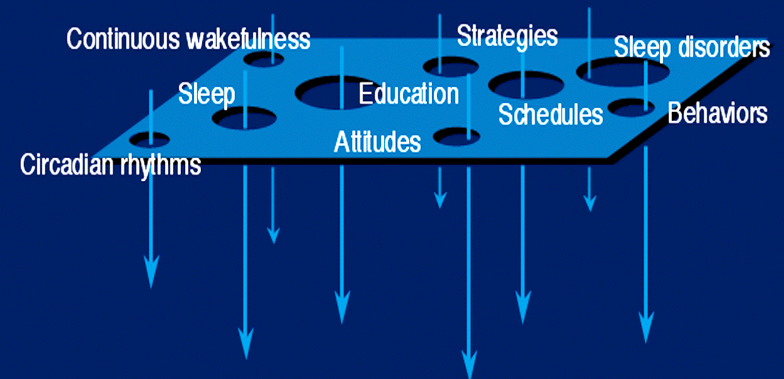
Organization/Corporation



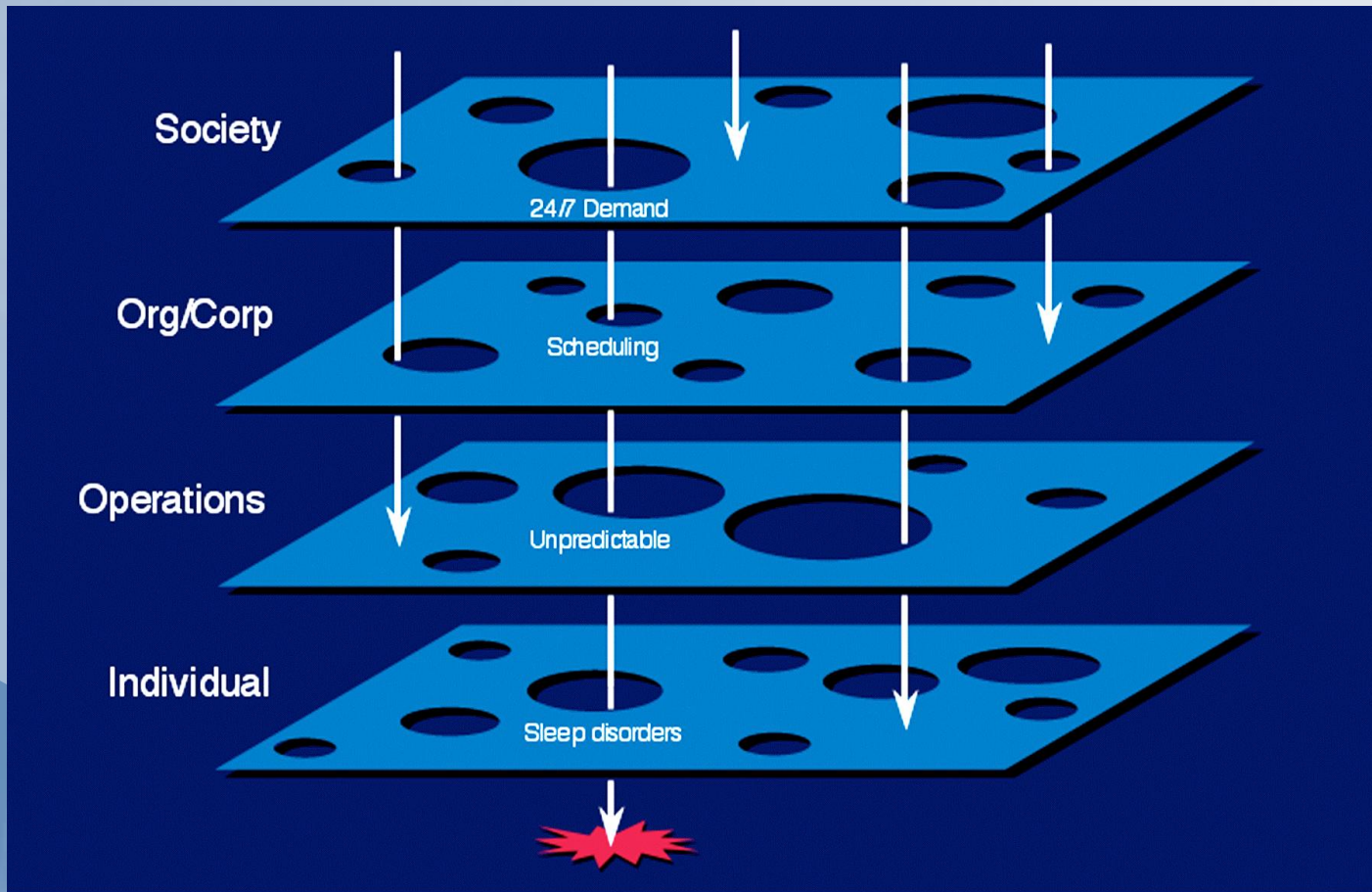
Operations



Individual

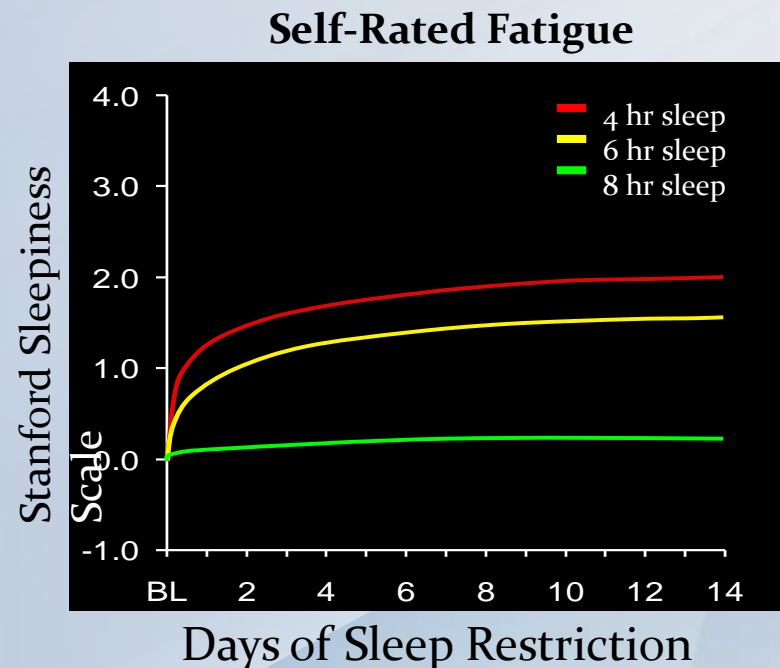
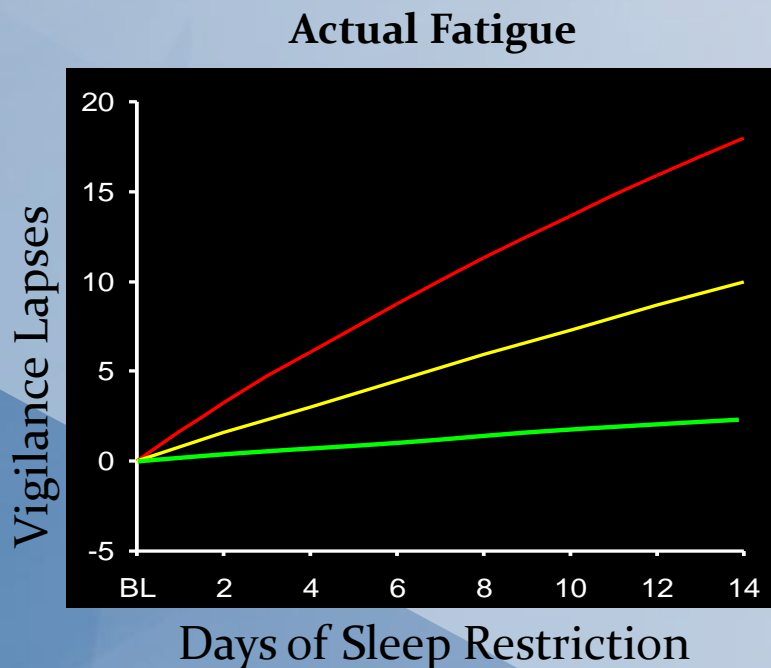


n accident or incident can occur when the risk factors “line up”.



they cannot reliably estimate their own level of fatigue

- During sleep restriction, objectively-measured fatigue differs substantially from perceived fatigue



From: Van Dongen, Maislin, Mullington, & Dinges (2003). The cumulative cost of additional wakefulness: dose-response effects on neurobehavioral functions and sleep physiology from chronic sleep restriction and total sleep deprivation. *Sleep*, 26, 117-126.

A close-up photograph of a baby's face, focusing on the eye and nose. The baby has dark hair and is looking slightly to the right. The background is a solid light blue color. Overlaid on the left side of the image is a quote in a stylized, bubbly blue font with a white outline.

**“It ain’t gonna
change itself!”**

Thank you.

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