



ALERTNESS
SOLUTIONS

Managing Alertness and Performance in 24/7 Settings: Lessons Learned

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Hours of Service “Policies”

- Historical perspective
- Federal regulatory approach
- Effective, functioning models

Hours of Service “Policies”

Necessary but not sufficient

Work Schedules Affect Physiology

Work schedule factors that affect sleep, circadian rhythms, alertness, performance, and safety include . . .

- early start times
- extended work periods
- work time w/in shift
- < 8 hrs off between work
- # consecutive work periods
- insufficient recovery time
- night work in circadian low
- day sleep periods
- schedule instability
- changing start/end times
- on-call status
- schedule predictability
- time zone changes
- unplanned extensions

The Challenges . . .

Diverse operational requirements

Individual differences

Complex physiology

History

Economics

The Challenges Preclude . . .

- One-size-fits-all
- “Magic Bullet”

Alertness Management Program

Education and training

Alertness strategies

Scheduling

Healthy sleep

Scientific and policy guidance

Current Efforts

- All modes of transportation
- Public safety/law enforcement
- Military
- Energy
- International

“For myself I never found need of more than four or five hours' sleep in the twenty-four. We are always hearing people talk about "loss of sleep" as a calamity. They better call it loss of time, vitality and opportunities. Just to satisfy my curiosity I have gone through files of the British Medical Journal and could not find a single case reported of anybody being hurt by loss of sleep.”

~ Thomas Edison, 1921

Success requires . . .

Culture change

Medical Parallels

- Identification and diagnosis
- Treatment and interventions
- Data: Evolution and refinement
- Clinical outcomes and ROI

The Opportunity

- Not rocket science: Negative outcomes
- More data: Diagnostic refinement and evolution
- Research, absence of data, definitive ROI
- When to take action . . . what action?