Fatigue Risk Management Strategies to Mitigate Elevated Levels of Fatigue in the Emergency Department

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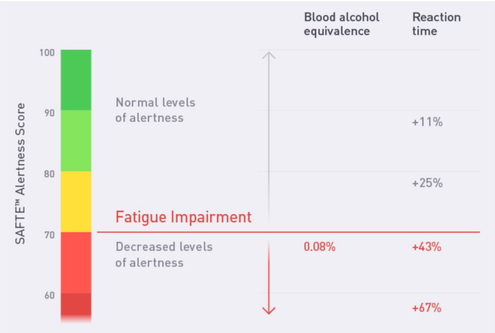
Background

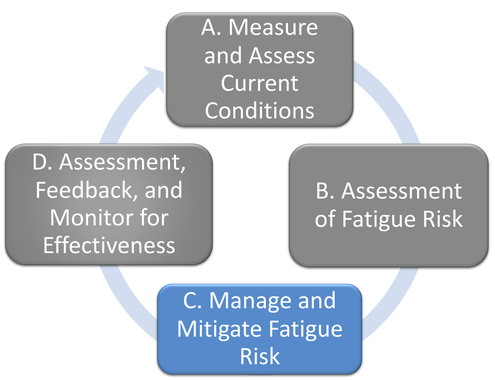
- Fatigue can lead to slowed reaction times, impaired memory, and decreased attention span.
- Fatigued drivers cause 20-30% of road accidents and 5-15% of fatal car accidents, and fatigue has been demonstrated to increase reaction times similar to intoxication.[1, 2]
- The consequences of fatigue are evident across various sectors; however, the healthcare setting is severely lacking in fatigue risk management strategies when compared with other workplaces.[1]
- In order to prevent the detrimental effects of fatigue, a fatigue risk management system (FRMS) should be implemented in the Emergency Department (ED).



https://www.fatiguescience.com/sleep-science-technology-2/

Methods

Previous research from this lab, including Readibands and qualitative interviews with ED physicians, indicated a need for FRMS in the ED. Potential fatigue mitigation strategies were then researched.



Results

Previous Research:

- Readiband data showed some physicians' Readiscores dropped into a state of severe fatigue during their work shift.
- Qualitative interviews with ED physicians showed trends of fatigue with responses such as:

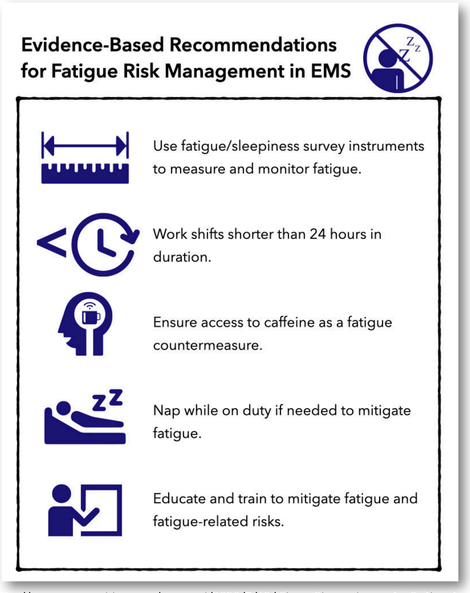
Fatiguescience.com

https://residentdoctors.ca/areas-of-focus/fatigue-risk-management/

"I don't know how to describe it, it's almost like when you feel dehydrated. You just feel washed out, and like, man, I've been here six and a half hours and I haven't even had an apple. I haven't had anything to eat. I haven't had any water, nothing."

Current Research:

- Meeting with the Department Chair of ED revealed that there is NO fatigue risk management system currently in use aside from managing work shift scheduling.



http://www.naemspblog.com/emsmed/2020/7/12/i8kwov2luzpnzhgoqp4px0v4lzyq1o

Conclusion

- Studies show that implementing these strategies leads to quicker reaction times, decreased sleepiness and fatigue, and improved psychomotor performance and vigilance.
- These strategies can be implemented on both an individual and systemic level for best results.
- Further research is needed to identify how best to apply these strategies in order to maximize effects.
- Additionally, future research must be conducted to determine how these strategies impact sleep quality and sleep duration, especially in regards to caffeine use.

Indicators of Fatigue: Common Symptoms

(Queensland Health, 2009; CCOHS, 2012; Sinha, Singh & Tewari, 2013)

PHYSICAL	MENTAL	EMOTIONAL/PSYCHOSOCIAL
Yawning	Reduced attention span	Irritability, poor temperament
Drooping eyelids	Decreased alertness	Quiet, withdrawn
Eye-rubbing	Poor judgement	Unmotivated
Involuntary nodding of head	Poor communication	Sluggish/lethargic
Involuntary naps/micro sleeps	Near misses/close calls	Giddiness
Poor/reduced motor skills		
Increased susceptibility to illness		

https://residentdoctors.ca/wp-content/uploads/2018/11/Fatigue-Risk-Management-ToolkitEN.pdf

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