

# Pulsar Informatics supports hospital study of physician alertness management strategies

Dec 2012 Case Studies Studies

## Challenges

Examine the effect of a 5-hour protected sleep period on interns' sleep, measures of behavioral alertness, and patient outcomes.

## Products and services

PVT

Sleep Fit



Pulsar Informatics was selected to support 2 hospital studies to determine whether a protected sleep period of 5 hours is feasible and effective in increasing the time slept by interns on extended duty overnight shifts.

The results of the study showed that implementation of a protected sleep period while on call resulted in an increase in overnight sleep duration and improved alertness the next morning.

## Solution

A 2009 report published by the National Academies on physician training duty hours recommended a protected sleep period of 5 hours during any work shift longer than 16 hours to reduce the risk of fatigue-related errors. In 2011 the governing body that oversees physician training (ACGME) revised duty hour standards to include recommendations related to the use of alertness management strategies, including "strategic napping, especially after 16 hours of continuous duty and between 10 p.m. and 8 a.m.

Pulsar Informatics was selected to support 2 hospital studies to determine whether a protected sleep period of 5 hours is feasible and effective in increasing the time slept by interns on extended duty overnight shifts. The research team included researchers from the Philadelphia Veterans Affairs Medical Center, University of Pennsylvania and Pulsar Informatics. The two study sites were the Philadelphia Veterans Affairs Medical Center and the Hospital of the University of Pennsylvania. Pulsar Informatics provided software to assess alertness and work rest patterns of physicians training

in internal medicine working extended duty shifts.

A total of 106 physicians in training participated in the study. During the study participants were randomly assigned to either a standard intern schedule (extended duty overnight shifts of up to 30 hours) or a trial schedule that included a protected sleep period from 12:30 AM to 5:30 AM. During the protected sleep periods a covering physicians took over the participants work cell phone.

Participants wore wrist actigraphs to monitor sleep, completed sleep diaries and alertness assessment including the PVT. The results of the study showed that implementation of a protected sleep period while on call resulted in an increase in overnight sleep duration and improved alertness the next morning. The full study results are published in the Journal of the American Medical Association (JAMA).

Pulsar Informatics provided state of the art fatigue assessment technology in support of the industry-critical study related to physician fatigue and the delivery of medical care in hospitals. Contact us to learn more about how to put our state-of-the art tools to work in your organization to reduce fatigue risks that may be impacting safety, performance, and cost.

Related links:

The full report from the National Academies entitled Resident Duty Hours: Enhancing Sleep, Supervision, and Safety.

<http://jama.jamanetwork.com/article.aspx?articleid=1475185>

## Our products and services are designed to make fatigue risk management decisions easy.

Fatigue Meter shows you exactly how operational factors such as long duty hours, night driving, and restricted sleep opportunities contribute to elevated fatigue risk on an individual driver level.

Our data-driven and scientifically validated tool gives you the confidence to implement mitigation strategies such as driver reassignment, nap breaks, and schedule changes as required.

**fatigue meter**<sup>™</sup>  
BY PULSAR INFORMATICS



## Ready to start managing fatigue risk?

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