

# A Shiftwork Education Program: Translating Non-Healthcare Evidence to Improve Nurse and Patient Safety

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# Objectives

- Describe fatigue as a physiological mechanism and the 'culture of fatigue' in healthcare
- Identify risks to patients and nurses caused by shiftwork-related fatigue
- Describe elements of a shiftwork education program suitable to the healthcare environment.

# What is fatigue?

- A loss of physiological and psychological function resulting from:
  - Extended wakefulness
  - Heavy workload (physical or mental)
  - Excessive stimulation or stress

- Fatigue – and its major symptom excessive sleepiness, is recognized in *law and regulation* as a:

- Significant body impairment
- Source of ill health
- Accident and injury risk

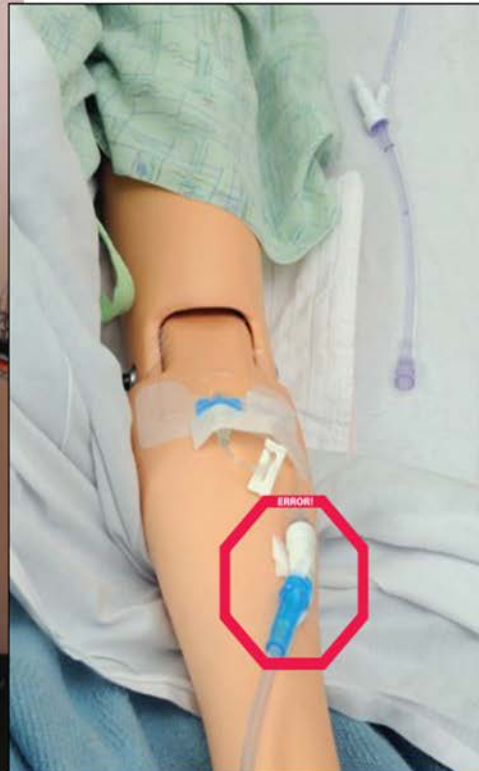
- Martin Moore-Ede PhD, MD
- The Twenty-Four Hour Society

# Fatigue Characteristics

- Loss of situational awareness- inability to connect-the-dots
- Slowed reaction times
- Can mimic psychosis
- Increased rate of errors
- Impaired performance
- Diminished capacity to communicate effectively







**WARNING:** Photographs depict oxygen tubing erroneously connected to a needleless IV port. **DO NOT DO THIS!**

#### EVENT

### Oxygen tubing erroneously connected to a needleless IV port

#### POTENTIAL FOR HARM

**High**

#### CASE STUDY

- A patient's oxygen tubing became disconnected from his nebulizer and was accidentally reattached to his IV tubing Y-site by a staff member who was completing a double shift
- The patient died from an air embolism, even though the connection was broken within seconds

#### THE JOINT COMMISSION SAFETY TIP

*Identify and manage conditions and practices that may contribute to healthcare worker fatigue, and take appropriate action*



# The Culture of Fatigue in Healthcare

- Altruism
- Martyrdom

“The average functional level of any sleep-deprived individual is comparable to the 9<sup>th</sup> percentile of non-sleep deprived individuals.”

-Circadian White Paper

Clinical decision regret is closely linked to health care worker fatigue.

-Linda Scott PhD, RN

Fatigued workers make five times  
more serious errors across  
**ALL INDUSTRIES.**

-Circadian Technologies

# What we can learn from non-healthcare industries

## ● Aviation

- Mandated training on sleep, fatigue and fatigue countermeasures
- Attestation of 'fitness for duty'
- Take action if someone is unfit for duty and the duty to report

## ● Ground transportation

- Legislation determines length of shift, hours worked per day, hours off between shifts
- Out of compliance operators are subject to license revocation and criminal prosecution

# A Shiftwork Education Program

- Adaptable for both prelicensure students and practicing professionals alike.
- Place this crucial information on par with other safety-related topics like sharps, blood borne pathogens, and ergonomic injury.

# Key Components

- Physiology of sleep and circadian rhythms
- Sleep hygiene practices
- Nutrition and fitness strategies for shift workers
- Safe driving after night shifts
- Evidence-based scheduling
- Families of shift workers
- Recognizing fatigue in yourself and others
- The risk of a fatigued work force
- Personal responsibility and the cultural norm of fatigue

Let's start treating fatigue like the  
sentinel event that it is!