Fatigue Among Healthcare Workers: Do Solutions Exist?

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Presentation Overview

• Define fatigue and the relationship between sleep fatigue
• Describe the evidence on sleep and fatigue in healthcare
• Outline recommendations for managing fatigue in healthcare
• Identify barriers to fatigue management
• Discuss how to overcome barriers and
• Identify future research needs
Understaffed and overworked: Nurses fatigued at the onset of pandemic’s winter wave

Smith, 2020

'We are all exhausted': CA allowing hospitals to bypass strict nurse-to-patient ratios amid COVID-19 surge

Associate Press, 2021, January 8

Exhausted Hospital Workers Crushed As Coronavirus Patients Flood In

Kaiser Health News, 2020

‘Our staff is exhausted.’ Riverside County healthcare workers brace for next COVID-19 surge

Nelson, 2020

Fatigue and exhaustion among healthcare workers as COVID-19 cases rise

Mackay, 2020

Thousands of L.A. healthcare workers sickened by coronavirus, worsening crisis in hospitals

Karlamangla, 2021

'Numb', 'grief', 'fatigued': Health care workers sum up COVID-19 in one word. What's yours?

Lindstron, & Basye, 2020

COVID-19 updates: Nurses report fatigue as North Texas counties reach all-time highs for hospitalizations

Wallis, Escobedo, & Howerton, 2020
What is Fatigue?

Fatigue is “the body's response to sleep loss or to prolonged physical or mental exertion.” (Lerman et al., 2012)

- Sleep Loss
- Physical Exertion
- Mental Exertion

- Decreased Alertness
- Poor Cognitive Functioning

- Occupational Injury Errors
Importance of Sleep

- Poor Sleep Circadian Disruption
- Neurological Health
- Mental Health
- Immunity
- Cardio-Metabolic Disorders
- Cancer

(Bryant et al., 2004; Cappuccio & Miller, 2017; Mander et al., 2016; Pigeon et al., 2017; Ward et al., 2019)
How Tired are Nurses?

Since COVID-19 Onset

• Nurses caring for COVID-19 patients had more fatigue and less sleep
• 83% of all nurses reported sleeping below 7-hours
• Regardless of COVID-19 patient care, nurses reported mod to high acute and chronic fatigue

Pre-COVID-19 (2004-2016)

• Dayshift nurses averaged 6-6.9 hours of sleep
• Nightshift nurses averaged 5.2-6.1 hours of sleep
• Acute fatigue and inter-shift fatigue mod to high Sleep was associated with patient safety

(Hittle et al., 2020, Geiger-Brown et al., 2012; Sagherian et al., 2020; Stimpfel et al., 2019)
Organizational Factors Contributing to Fatigue

- Workload
- Work Timing
- Extended Work Hours
- Culture

(Chen et al., 2011; Dall'Ora et al., 2016; Folkard & Lombardi, 2006; Geiger-Brown et al., 2012; Hittle et al., 2021)
Fatigue Risk Management

Organization
- Provide time for rest
- Educate and train staff
- Monitor for fatigue

Workers
- Use time off for rest
- Arrive fit for duty
- Engage in education and training

A Joint Effort Between Leadership and Workers

(Caruso et al., 2017; Hafner et al., 2016; Lerman et al., 2012; Steege et al., 2017; Williamson & Feyer, 2000; Wong et al., 2019)
Fatigue Risk Management: Organization

- Provide time for rest
  - Sufficient breaks during shifts, in-between shifts, and between blocks of shifts

- Educate and train staff
  - Risks associated with poor sleep/fatigue
  - Strategies for prevention/mitigation

- Monitor for fatigue
  - Technology to predict and monitor fatigue

(References: Caruso et al., 2017; Lerman et al., 2012; Wong et al., 2019; Wong et al., 2020)
### Fatigue Risk Management: Workers

<table>
<thead>
<tr>
<th>Use time off for rest</th>
<th>• Take breaks, rest/sleep when time is provided</th>
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<tr>
<td>Arrive fit for duty</td>
<td>• Fitness for duty should include being well-rested</td>
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| Engage in education and training | • Attending training programs  
|                      | • Employing strategies in practice |

(Caruso et al., 2017; Lerman et al., 2012; Wong et al., 2019)
Barriers to Fatigue Risk Management

- No “one size fits all” approach for organizations
- Individual differences among workers
- Limited staffing resources
- Heterogeneity in research
- Fatigue is not always easy to measure
- Data sources for contributing factors disjointed
- Sleep and fatigue lacking in adverse event root cause analyses

(Brzozowski et al., 2021; Hittle, 2021; Querstret et al., 2020; Redeker et al., 2019; Wong et al., 2019; Wong et al., 2021)
Addressing Barriers

- Heterogeneity in practice settings and research
  - Developing evidence-based programs

- Individual differences
  - Education, “buddy systems”

- Limited staffing resources
  - Academic-practice partnerships

- Fatigue is not easy to measure
  - Self-report surveys, short cognitive tests

- Data sources disjointed
  - Predictive model products

- Sleepiness not tracked in adverse event root cause analyses

- Joint effort and culture

(Centers for Disease Control and Prevention, 2020; National Council of State Boards of Nursing, 2020; National Institute for Occupational Safety and Health, 2015; Pryse et al., 2020)
Need for Future Research

- Culture change
- Predictive models
- Fatigue detection and counter strategies
- Education
- Individual differences
- Effectiveness of full fatigue risk management program
Thank you!

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References

References

References


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