Innovations in Fatigue Risk Management Systems

Sigma Theta Tau
Creating Healthy Work Environments
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Disclosure Slide

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• No conflict of interest
Learner Objectives

• Provide an overview of the current state of fatigue risk management systems (FRMS) in hospitals
• Highlight the importance of establishing an infrastructure to support adoption of fatigue risk management systems
• Share a toolkit for implementation of FRMS
• Highlight a recent innovation to mitigate fatigue in a hospital setting
Fatigue: Why is it important?

• Occupational fatigue in nurses is a significant healthcare challenge with implications for patient safety, nurse well-being and nurse retention\textsuperscript{1,2}

• Nurse fatigue results from shift work, mental, physical, psychosocial demands

• Sources of fatigue span all components of nursing work systems\textsuperscript{3}
Prevalence of Fatigue

• Nationally 37.9% of US workers experience fatigue\textsuperscript{4}
• Nurses 65% experience acute fatigue and almost 50% chronic fatigue\textsuperscript{5}
Occupational Fatigue in Nurses

• Complex multidimensional state (ranging from acute to chronic) that arises when nurses are exposed to excessive demands and stressors in their work with insufficient recovery or restoration. Fatigue interferes with nurses’ ability to function at normal capacity.

• Related to, but distinct from, burnout and sleepiness constructs.
Conceptual Model of Fatigue

Nursing Work System

- Technology and Tools
- Organization
- Tasks
- Environment

Processes

Nurse Fatigue

- Mental Fatigue
- Emotional Fatigue
- Physical Fatigue
- Acute Fatigue
- Chronic Fatigue

Outcomes

- Nurse Well-being
- Performance Satisfaction
- Patient Safety
- Quality of Care
- Organization Efficiency
- Cost
- Staff Retention
What is a Fatigue Risk Management System (FRMS)?

- A scientifically based, data-driven approach to prevent and mitigate fatigue across an organization. Additional features:
  - Designed by key stakeholders
  - Fully implemented and integrated
  - Budgeted resources
  - Continuously improved
  - Owned by senior organizational leaders
Conceptual Framework
Multi-Level Fatigue Risk Management Model

Improved Outcomes
- Patient safety
- Staff well-being, performance, & satisfaction
- Organization quality & staff retention

Data Sources
- Capacity Data
- Demand Data

Fatigue Monitoring
- Individual
- Team/Unit
- Organization

Decision-Support Tools
- Alerts and reporting
- Schedule optimization
- Predictive Analytics

Risk Management Responsibilities/Controls:
- Eliminate sources of fatigue
- Reduce exposures to sources
- Mitigate the effects of fatigue on outcomes
- Employ education and coping strategies

Decision-Making
- Assess
- Diagnose
- Predict
- Prevent
Key Components of a FRMS

• Organizational fatigue management policy
• Strategies to assess fatigue sources and hazards
• Controls to mitigate fatigue-related risks
• Fatigue-reporting systems including a system to self report
• Fatigue incident investigation
• Fatigue management training for employees and organizational leaders
• Internal and external auditing of system
Current National Guidelines and Position Statements

• American Nurses Association
• Registered Nurses Association of Ontario
• The Joint Commission
• World Health Organization
• Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine
• American Academy of Nursing
Current State of FRMS in Hospitals

National Study\textsuperscript{3,10}
Online Survey
62-item survey of CNE, Directors, and Managers

• 158 participants, 29 different states
Overall Findings\textsuperscript{3,10}

• Data sources and collection strategies that enable regular monitoring of nurse fatigue are lacking

• Participants overwhelmingly reported that their organizations are not currently monitoring nurse fatigue levels

• 90% did not have access to decision support tools to help manage fatigue
Overall Findings

• Existing strategies to address fatigue primarily focus on scheduling policies, education about fatigue, and programs to promote self-care

• Published recommendations/policies to address fatigue are not widely adopted and/or implemented

• Only 25% had an organizational Fatigue Management Policy
Addressing the barriers and challenges

• Stigma reporting fatigue
• Super nurse culture
• Complexity of healthcare - multi-levels and teams
• Senior leadership support
• Lack of best practice FRMS in healthcare
• Time to design and implement
Framework for Adoption

External Environment
- Professional Culture
- Economic Incentives

Organization
- Educational Systems
- Antecedents for Change
- Infrastructure
- Regulatory Standards

Multi-Level Fatigue Risk Management in Nursing Work Systems

External Dissemination Strategies
Nurse leaders role to drive adoption

• Opportunities to partner with human factor engineers
• Data and monitoring is critical
Overview of FRMS tool kit
Current Innovations in Fatigue Mitigation - REFRESH©

REducing nurse Fatigue to impRovE Safety in Hospitals

• Education
• Unit Culture
• Fatigue Monitoring
• Strategic Napping Protocol
Questions and Dialogue
References


References


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