THE HEALTH OF NURSES RELATED TO THE FUTURE OF HEALTHCARE

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At the conclusion of this presentation participants will:

- Be able to identify Fatigue Induced Effects for Nurses at the beside working 12 hour shifts
- Understand the concerns of major stakeholders regarding negative outcomes of 12-hour shifts for nurses, including sleep deprived fatigue, negative neurobehavioral outcomes and patient safety including medical errors.
In 2000, the IOM stated in their ground-breaking report, *To Err is Human*, that nurses’ long work hours are one of the most serious threats to patient safety.
1935: The American Journal of Nursing

Lillian M. Gilbreth, PhD.

May 24, 1878 – January 2, 1972

FIRST MENTION
FATIGUE AS IT AFFECTS NURSING
Twelve-hour shifts were devised by Baylor University Medical Center:

- Attract registered nurses (RNSs) to hospital nursing during a shortage
- Address turnover

HISTORY OF 12 HOUR SHIFTS
Staff nurses worked three 12-hour shifts and were paid a standard work week of 40 hours per week. Initially, the Baylor Plan allowed nurses to work full time with 4 days off work per week.

However, now nurses may work as many as five or six 12-hour shifts weekly.
NEGATIVE OUTCOMES OF 12 HOUR SHIFTS

- Fatigue
- Decreased Vigilance
- Increased Needle-stick Injuries
- Musculoskeletal disorders
- Drowsy Driving
- Neurobehavioral changes
- Inability to objectively judge personal sleepiness level
  Sleep deprivation

Sentinel Alert - TJC (2011)
2015 - The Occupational Safety Healthcare Administration (OSHA) issued recommendations related to nurses' work schedules, including strong emphasis upon fatigue management and safety risk strategies.

OSHA stressed that working shifts longer than 8 hours resulted in reduced productivity and alertness.
2,273 RNs

Conclusion:

- Nurses working too long, too much, and without adequate rest between shifts.
- Some RNs reported working shifts of 12 or more hours.
- Working more than one job comprised of 12-hour shifts.
- Working more than 50 hours per week.
- Getting inadequate sleep and rest between consecutive shifts.
805 surveys from 99 nursing units, comparing outcomes from nurses working 8-hour shifts with outcomes reported by those working 12-hour shifts.

- Nurses who worked 12-hour shifts were on average more satisfied with their jobs.
- This study found no differences in patient outcomes.
- Nurses working the 12-hour shifts reported being less emotionally exhausted.
- Units with 12-hour shifts had lower vacancy rates.

8-HOUR VS. 12-HOUR Shifts
Stone et al. (2006)
Nurses' cognitive decline when working 12-hour night shifts (7 p.m. to 7 a.m.).

Night-shift nurses sleep at irregular times and out of sync with their normal circadian rhythm.

Sleep-deprived fatigue including microsleeps

Impaired information processing and learning

- Review of 10 studies measuring performance – none showed positive outcomes

Systematic Review of studies between 1995 and 2002 (Caruso et al.)

- When nurses worked 12 or more hours, fatigue-related changes in nursing vigilance, increased needle stick injuries, and an increase in musculoskeletal disorders (especially neck, shoulders, and back) were reported.
Health consequences included hypertension, diabetes, and impaired glucose tolerance. Nurses reported failing to achieve adequate sleep between 12-hour shifts to recover physically and cognitively.

Sleep deprivation consequences showed a linear increase in impaired neurobehavioral responses, such as reaction time and lapses of attention, as staff became more fatigued with consecutive 12-hour shifts and increased sleep deficit.
Eighty percent of nurses were satisfied with scheduling practices – HOWEVER…

As proportion of nurses working shifts of more than 13 hours increased, patients’ dissatisfaction increased.

Nurses working shifts of 10 hours or longer were up to 2.5 times more likely to experience burnout and job dissatisfaction and intent to leave.
American Academy of Nursing’s million hearts sub-committee of the health behavior expert panel.

- 53 questions
- Offered through nursing organizations and 20 US hospitals
- Only nurses in clinical practice included
- Majority were white women and average age of 44
- 54% nurses reported poor physical and mental health.
- About a third reported depression, anxiety or stress.
- Less than half said they had a good professional quality of life.
- Half reported medical errors in past 5 years.
- Wellness data compared to medical error data revealed a significant link between poor health – particularly depression - and medical errors.
Key recommendations:

- Nurses not exceed 40 hours of professional nursing in a seven-day period
- Make sure nurses are aware of research that as you pass 12-hour mark in a shift, your ability to be sharp begins to diminish. Over a period of years, not getting good sleep can take a toll.
Nurses are accountable for their practice

Ethical responsibility to address fatigue and sleepiness in the workplace

Responsible for:

- Practicing healthy behaviors
- Taking meal and rest breaks
- Negotiating or rejecting a work assignment to make sufficient time for sleep and recovery

NURSE RESPONSIBILITY
Assess organization for fatigue-related risks
Assess hands-off processes
Invite staff input into fatigue reduction schedules
Educate staff on sleep hygiene

Develop a fatigue-awareness culture
Use teamwork to address co-worker fatigue
Include factor fatigue in each adverse event review
Create policy to protect “strategic napping”

ORGANIZATIONAL STRATEGIES

TJC (2011)
MOST IMPORTANTLY

- Initiate scientific-based organization wide fatigue management plan
  - Active problem-solving conversations
  - Encourage staff to be physically active (exercise)
  - Consume caffeine judiciously
  - Strategic napping

TJC, 2011
REFERENCES


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