

12-hour shifts and nurse fatigue

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Are nurses more susceptible to fatigue when working twelve-hour shifts, in comparison to those working standard eight-hour shifts?

Twelve-hour shifts are commonly used in high acuity areas such as ICU, CCU and ED (Walker L. personal communication, April 2, 2015). Nurses who work in these environments need to be alert to subtle clinical changes but this may be impeded by fatigue.

Literature shows error rates, health and wellbeing and social activities of nurses are influenced by fatigue.

According to the latest New Zealand Nurses Organisation Employment Survey approximately 10% of New Zealand's Registered Nurses work 12-hour shifts (Walker, L. personal communication, April 2, 2015).

Health and wellbeing:

Twelve-hour shifts increase risks for nurses health (Caruso, 2014).

The health risks include:

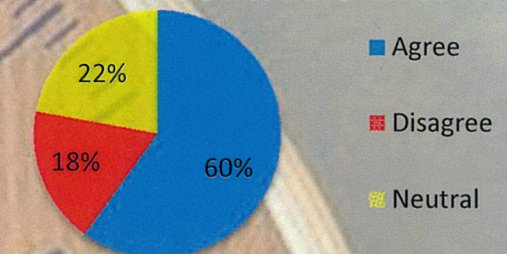
- Higher body mass index
- Higher incidences of type 2 diabetes
- Cardiovascular disease
- Hypertension
- Gastrointestinal problems (Cassie, 2015)
- Sleep disorders (Keller, 2009)

Registered nurses need to take care of themselves before they can take care of patients.

Error rates:

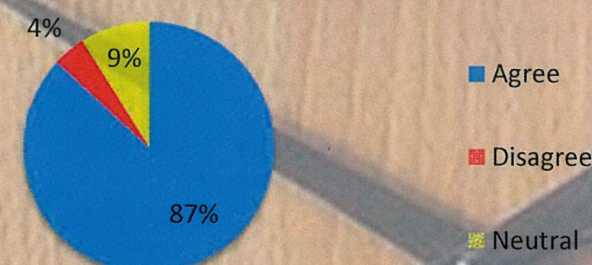
- The number of errors nearly doubles when nurses work 12.5 or more hours (Scott, Rogers, Hwang & Zhang, 2006).
- Fatigue increases potential for clinical errors (Keller, 2009).
- Twelve-hour shifts increase fatigue-related injury and errors by 28% compared to 8-hour shifts (Caruso, 2014).

Makes me feel tired after working 2 or more consecutive shifts



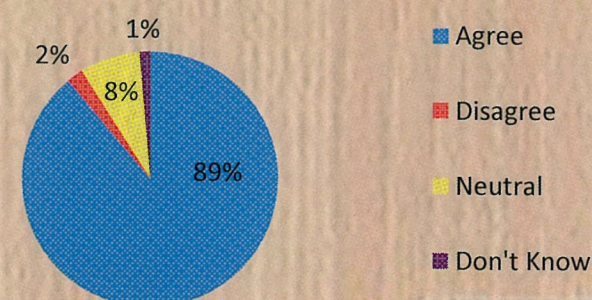
(Richardson, et al., 2007)

Leads to good-quality time off work



(Richardson, Turnock, Harris, Finley & Carson, 2007)

Makes it easy to plan patient care throughout a shift



(Richardson, et al., 2007)

Social

Study participants are overall satisfied with their work/life balance when working 12 hours compared to 8. Work weeks are condensed into fewer days because of the longer shift lengths. Satisfaction with rosters is due to better quality free time off with family, traffic avoidance, lifestyle and parking benefits (Kai Tiaki Nursing New Zealand, 2011).

Recommendations:

- Make sleep a priority between shifts
- Communicate sleep needs to family and friends
- Self-care behaviours that maximize sleep and alertness patterns
- Promote healthy staff relationship building activities
- Communication within nursing team as to individual needs
- Information on sleep and fatigue management
- Bright lighting within the facility
- Adequate breaks
- Ventilation
- Healthy food available (Caruso, 2014 & Keller, 2009)

References

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PICOT framework (Schneider & Whitehead, 2013)

PICOT category	Information relating to question	Explanation
Population	Nurses regularly working 12-hour shifts in hospitals.	Nurses working in hospitals on 12-hour shifts are often within the ICU, CCU and ED. In these environments the patients are more likely to be high dependency or in a critical state. Working 12-hours can increase the nurses fatigue level causing a decrease in care for patients throughout the shift.
Intervention	Nurse fatigue after working consecutive 12-hour shifts.	Researching literature that identifies physical, mental and social effects on nurses will identify potential adverse nurse and patient implications.
Comparison	Comparing the fatigue of nurses working standard 8-hour shifts.	Comparing nursing fatigue to highlight whether longer shifts and fatigue are related to the occurrence of errors.
Outcome	Nurses are more likely to experience fatigue when working consecutive 12-hour shifts compared to 8-hour shifts.	To find out whether 12-hour shifts increase fatigue of nurses. It will show any coloration between fatigue and higher rate of clinical errors or near misses, the health implications and social benefits or implications to nurses.
Time	NA.	NA.

Rationale

I have chosen a poster to represent my literature review in an effort to raise awareness of the health risks to nurses and patients of working 12-hour shifts. The majority of the information within research articles states that nurses prefer 12-hour shifts because the work week is condensed enabling better quality time to spend with family and friends.

I was concerned to discover the number and variety of personal health problems and the increased risk of clinical errors that are associated with 12-hour shifts and realised that this information is possibly not well known among the nursing community.

I decided that making a poster would be the best way to inform nurses and employers of the potential harm of working 12-hour shifts. Raised awareness around this clinical issue will help to increase the amount of quality research available, hopefully providing clearer knowledge of the risks to benefits. If a clearer picture of potential harm is developed then a submission to the Ministry of Health and Department of Labour would be the next step towards change in regards to 12-hour shifts staying or being stopped in New Zealand hospitals.