

# Sleep Disturbances And Cognitive Impairment In Night Shift Staff

Kristina J. Rosario BSN, RN  
*Lehigh Valley Health Network, kristina\_j.rosario@lvhn.org*

Christine Jurgielewicz, BSN, RN  
*Lehigh Valley Health Network*

Carrie A. Savickas BSN, RN  
*Lehigh Valley Health Network, carrie\_a.savickas@lvhn.org*

Carolina Walker BSN, RN  
*Lehigh Valley Health Network*

Follow this and additional works at: <http://scholarlyworks.lvhn.org/patient-care-services-nursing>



Part of the [Nursing Commons](#)

---

## Published In/Presented At

Rosario, K., Jurgielewicz, C., Savickas, C., & Walker, C. (2015, November 6). *Sleep Disturbances And Cognitive Impairment In Night Shift Staff*. Poster presented at LVHN UHC/AACN Nurse Residency Program Graduation, Lehigh Valley Health Network, Allentown, PA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact [LibraryServices@lvhn.org](mailto:LibraryServices@lvhn.org).

# SLEEP DISTURBANCES AND COGNITIVE IMPAIRMENT IN NIGHT SHIFT STAFF

Kristina Rosario, BSN , RN; Christine Jurgielewicz, BSN, RN; Carrie Savickas, BSN , RN; Carolina Walker, BSN, RN

Lehigh Valley Health Network, Allentown, Pennsylvania

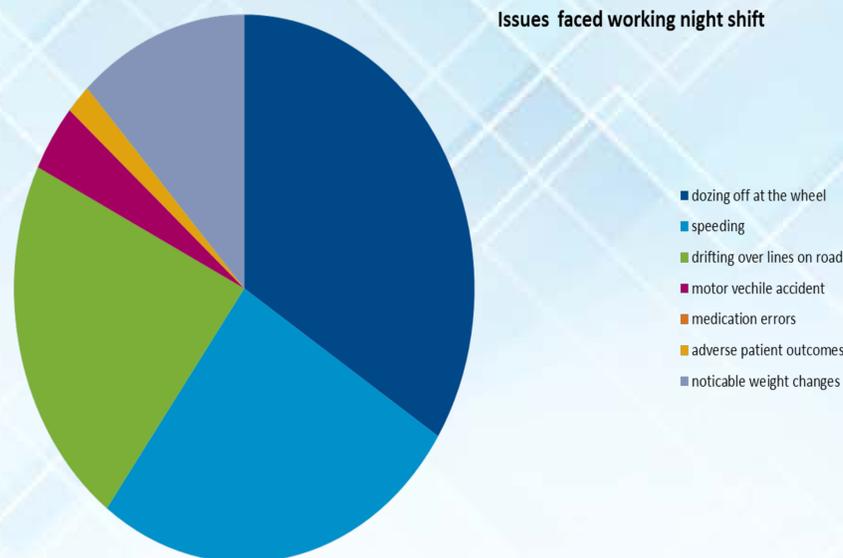
## PICO QUESTION

In night shift staff on the clinical units 7T, 5C, and 5B, does education on sleep hygiene strategies and neurocognitive impairments caused by sleep deprivation compared to no education increase quality of sleep, amount of undisturbed sleep, and increased alertness during working shift.

## PURPOSE/ BACKGROUND

The purpose of this project was to assess the sleep patterns of night shift staff and educate this population on strategies to promote quality sleep in order to decrease performance deficits, impaired performance processing, and impaired mood as sleep deprivation and impaired neurocognitive ability is encountered on a daily basis within this population.

LVHN policy states, staff can take 30 minutes of unpaid meal break and two 15 minutes paid breaks during the shift (12 hour shift). Breaks cannot be combined.



## EVIDENCE

- Search engines used: Google scholar, EBSCO host, NIH, American Journal of Nursing. Key words used: shift work, sleep disorders, sleep hygiene, interventions, nursing nightshift staff.
- According to the NIH, most adults need 7 to 8 hours of quality sleep per day to function optimally and feel refreshed.
- Night shift staff are less likely than the general population to have an adequate amount of quality sleep. Leaving them at an increased risk for sleep deprivation, which threatens patient and staff safety.
- Sleep deprivation negatively impacts mood, cognitive performance, and motor function due to increasing sleep propensity and destabilization of the wake state.
- Lack of sleep can contribute to a variety of chronic diseases: obesity, diabetes, cardiovascular diseases, and certain cancers.
- Acute sleep loss (sustained wakefulness) of 19 hours and 24 hours is associated with performance deficits equivalent to those seen in people with blood alcohol concentrations of 0.05% and 0.10%, respectively.
- Chronic partial sleep deprivation: Repeated failure to gain sufficient sleep to fully recover from previous wake episode has a cumulative detrimental effect on waking function that rapidly builds to significantly impair performance.
- Continuous education on the importance of sleep, fatigue management, and sleep hygiene is one way to promote behavior changes that can improve the quality and quantity of sleep among nurses, therefore increasing patients' and staff's safety.

## IMPLEMENTATION

1. Process Indicators and Outcomes - RN's and TP's answered 4 surveys: a pre and post Epworth Sleepiness Scale and a pre and post education survey.
2. The pre education survey was used as the baseline data
3. Design EBP project: A pre Epworth Sleepiness Scale A pre-education survey An educational power point about sleep hygiene A post Epworth Sleepiness Scale A post-education survey
4. Implemented EBP on Pilot Units: 7T, 5C, 5B 5
5. This project did not cause any modifications to the Practice Guideline

## RESULTS/ RECOMMENDATIONS

- When comparing pre and post Epworth sleepiness scale, it was found that after education there was no significant value of change found between pre and post education which may be due to the short period of the project duration. Comparing the pre and post education survey, we also found that the participants amount of sleep did not change
- Lehigh Valley Health Network would benefit from annually educating the night shift staff on ways to improve sleep quality and hygiene. Perhaps implementing this education in the core bundle. Our survey found that 100% of our night shift staff surveyed would be interested in more education to promote sleep hygiene.

### REFERENCES

- Eanes, L. (2015). The Potential Effects of Sleep Loss on a Nurse's Health. *American Journal of Nursing*, 115(4), 34-40. doi:10.1097/01.NAJ.0000463025.42388.10
- Knutsson, A. (2003). Health disorders of shift workers. *Occupational Medicine*, 53, 103-108. doi:10.1093/occmed/kqg048
- Fallis, W., Mcmillan, D., & Edwards, M. (2011). Napping During Night Shift: Practices, Preferences, and Perceptions of Critical Care and Emergency Department Nurses. *Critical Care Nurse*, 31(2), 1-11. doi:10.4037/ccn2011710

© 2014 Lehigh Valley Health Network