Quality and Quantity of Patient Sleep in the Hospital: Perceptions and Measures

February 24, 2018
Presented by:
Teresa Jahn MSN, APRN, CCNS, CCRN

Located in Central Minnesota

St. Cloud Hospital
Re-Designated a Magnet Hospital September 2013 for the third time
First Magnet Designation June 2004

St. Cloud Hospital – 489 beds
Part of CentraCare Health
Magnet Designated – 3 times consecutively
Level II Trauma Center
One of 50 Top Cardiovascular Hospitals by Truven
100 Top Hospitals (nine-time honored) by Truven
U.S. News & World Report “America’s Best Hospitals”
Ear, Nose and Throat
Orthopedics
Urology
Disclosures

- No disclosures

Background/Literature Review

- Sleep quality is defined as the patient’s subjective perception of his or her sleep
- Sleep is consistently reported to be affected during a patient’s hospitalization
  
  Caple & Strayer, 2014; Dogan, Ertekin, & Dogan, 2005; Elliot, McKinley, & Cistulli, 2011

Background/Literature Review

- Insufficient sleep during hospitalization has been associated with physical and cognitive dysfunction, mood instability, fatigue and delirium

  Flynn Makic, Rauen, Watson & Potret, 2014
Background/Literature Review

• Factors affecting sleep have been classified into three common categories:
  – Environmental
  – Patient specific
  – Nursing interventions during patient’s sleep time

Caple & Strover, 2014; Dogan, Ertekin, & Dogan, 2005; Elliot, McKinley, & Cistulli, 2011

Background/Literature Review

• Significant differences between nurses and patients’ perceptions of sleep have been reported

Nesbitt & Goode, 2014

The Cost of Sleep Deprivation

• Lack of sleep can greatly impact:
  – The healing process for immune function
  – Carbohydrate metabolism
  – Cognitive performance

Pilkington, 2013; Radtke, Obermann, & Tyrer, 2014; Yilmaz, Sayin, & Gurler, 2012
The Cost of Sleep Deprivation

- Sleep disruption contributes to adverse in-hospital and post-discharge outcomes, such as respiratory dysfunction, **DELIRIUM**, and post-hospital syndrome.

Delirium

- A disturbance of consciousness, attention, cognition and perception that develops over a short period of time (hours to days) and tends to fluctuate during the course of the day.

Sleep Assessment

- Despite nurses’ awareness of the negative effects of sleep deprivation on patients’ health, quality of sleep is often not promoted by nursing staff members and sleep assessments are performed inadequately or not at all.

Radtke, 2014; Nesbitt, 2014; Yilmaz, 2012
Future for Sleep

- Strides are being made to improve patients’ overall sleep during their hospital stay
- Thomas et al 2012 demonstrated patient’s overall perceptions of sleep improved after nursing staff members implemented simple interventions in efforts to promote sleep and increase patient satisfaction

The Sleep Study

- This non-experimental study compared patient and nurse perception, quality, and quantity of hospitalized medical patient’s sleep
- Following IRB approval, the study began in August 2015 and completed December 2016

Research Questions

- What is the difference between patient perception of sleep and sleep efficiency (quantity) as measured by wrist actigraphy with a Fitbit?
- What is the relationship between patient perception of sleep quality and sleep quality as measured by wrist actigraphy with a Fitbit?
Research Questions

• What is the perceived sleep quality of adult inpatients on a medical unit?

• What do nurses perceive as the quality of sleep of adult inpatients on a medical unit?

• What is the difference between nurse and patient perception of quality of sleep?

Sample

• Medical patients on one unit who met inclusion and exclusion criteria

Inclusion Criteria

• English speaking, 18 years or older
• Ability to understand how to complete a questionnaire with a visual scale
• Were alert and orientated
• Length of stay greater than one night
Exclusion Criteria

• Patients on comfort care
• Isolation
• Acute medical crisis (relentless pain, respiratory distress, labile blood sugars)
• If unable to complete RCSQ or removed Fitbit during the night, they were removed from the study

Sample Size

• 93 patient/nurse pairs

Data Collection Methods

• Once consent was obtain, the research team member activated and applied the Fitbit to the subject’s non-dominant hand
• Data were collected from the evening through the following morning
• The Fitbit was removed between 0600 and 0730 the following morning, data were downloaded
### Data Collection Methods

- Patient was asked to complete an RCSQ after Fitbit was removed in the morning
- The subject’s assigned night nurse also completed the RCSQ

### The Richards-Campbell Sleep Questionnaire

- A self reported, five-item visual analog scale used to measure sleep characteristics
- Five domains of sleep are measured
  - Sleep depth
  - Falling asleep
  - Number of awakenings
  - Percent of time awake
  - Overall sleep quality

### The Questionnaire

- My sleep last night was
  - Light...Deep
- Last night the first time I got to sleep, I,
  - Just Could Never Fall Asleep...Almost Immediately
- Last night I was
  - Awake All Night Long...Awake Very Little
- Last night, when I woke up, or was awakened, I
  - Could Not Get Back To Sleep...Got Back To Sleep Immediately
- I would describe my sleep last night as
  - A Bad Night’s Sleep...A Good Night’s Sleep
- I would describe the noise level last night as
  - Very Noisy...Very Quiet
Results

- Subject patients perceived quality of sleep as 276 on a 0-500 RCSQ scale
- Subject nurses perceived quality of sleep as 294 on a 0-500 RCSQ scale
- Paired T-Test indicated no statistical difference $(p=.095)$

Results

- No statistical relationship was found between the subject patient perception of sleep quality and the sleep quality as measured by the wrist actigraphy with a Fitbit $(p=.073)$
- Patients perceived they were awake more frequently than as measured by wrist actigraphy $(p=.045)$

Conclusions and Implications for Practice

- Study results indicate patient and nurse perception of quality and quantity of sleep is similar
- Patients perceived more awakenings than measured by Fitbit
- Results may vary with the use of a sleep hygiene protocol for sleep promotion in hospitalized patients
Conclusions and Implications for Practice

- There are opportunities to improve the quality and quantity of hospitalized patients’ sleep
- Our hospital has a *Sleep Assessment and Promotion Guideline* policy, however the study revealed that few nurses were aware of the existence of the policy
- Awareness of the policy did not necessarily result in utilization of the interventions

Next Steps

- As of February 2017, a graduate student is reviewing the evidence and modifying the sleep guidelines
- A plan will be implemented to change practice which will improve patients’ quantity and quality of sleep during hospitalization
- Once incorporated into nursing practice, a repeat research study using the RCSQ will be done

Thank You to All Who Contributed to This Study

- Roberta Basol MA, RN, NE-BC
- Karen Chalich BNS, RN, CNN
- Patricia Dumonceaux MSN, RN, CIC
- Diane Hughes BSN, BA, RN
- Sarah Latour MSN, RN
- Jessica Miller MSN, APRN, CNS, RNC-OB
- Katie Notch BSN, RN
- Ariel Reischl BSN, RN
- Sherri Reischl RN, CEN
- Joyce Simones Ed.D, MSN, RN
- Alisha Voight RN
Thank You to All Who Contributed to This Study

- Roberta Basol MA, RN, NE-BC
- Karen Chalich BSN, RN, CNN
- Patricia Dumonceaux MSN, RN, CIC
- Diane Hughes BSN, BA, RN
- Sarah Latour MSN, RN
- Jessica Miller MSN, APRN, CNS, RNC-OB
- Katie Notch BSN, RN
- Ariel Reischl BSN, RN
- Sherri Reischl RN, CEN
- Joyce Simones Ed.D, MSN, RN
- Alisha Voight RN

References

References


