

Using the Recovery Model in the Development of a Sleep Hygiene Program for Individuals in a  
Psychiatric Inpatient Setting

by

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## Dedication

I first would like to thank Jesus Christ, for through Him all things are possible. Special thanks to my children, Mariah, Meghan, Nikayla, and Kalissa; my husband, Mailvin; and to my family, friends, and classmates. I appreciate your friendship and kindness.

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## Abstract

The objective of this study was to evaluate sleep disturbances, review treatment methods, and develop a plan of treatment options utilizing sleep hygiene methods. A review of literature included sleep disturbances and interventions to alleviate such problems. Hospital staff was queried regarding sleep disturbance and solutions to patients' difficulty with sleep. Patient satisfaction surveys were collected and analyzed and the data were used to develop educational workshops for inpatient mental health nursing staff to enhance their awareness of sleep hygiene as a recovery focused self-care strategy for patients with mental illness.

Through an action plan created from feedback by the nursing staff, utilization of sleep hygiene methods resulted in higher reported patient satisfaction with sleep. These results suggest the educational workshops may provide an opportunity to empower patients to care for themselves and to promote continued self-care guidelines after discharge.

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## Introduction

Sleep disturbance affects an estimated 70 million Americans (American Academy of Sleep Medicine [AASM], 2010), making it a significant public health issue necessitating definitive diagnosis and treatment. An inability to sleep may affect daytime functioning in areas such as driving, thought processes, and work performance (Broch, Buysse, Dorsey, Sateia, & Schutte-Rodin, 2008).

The Centers for Disease Control and Prevention (CDC) recognize sleep disturbance as difficulty falling asleep or remaining asleep and awakening with an inability to return to sleep (2012). Individuals struggling with psychological issues such as depression or with physical ailments such as pain may be impacted by loss of sleep. Those who are hospitalized for mental or physical illness may also experience increased sleep disturbances, resulting in an exacerbation of co-morbidities and an increased length of hospital stay (Hirschfeld & Weissman, 2002).

Both internal and external factors can influence a person's ability to achieve a full night's sleep. Individuals admitted for inpatient psychiatric services might experience increased levels of sleep disturbance due to anxiety related to unfamiliar surroundings, loss of control, and uncertainty related to the length of stay. Environmental factors such as lighting or room temperature may also affect one's ability to sleep (Redeker & Hedges, 2002).

To promote adequate sleep in the inpatient setting, the sleep needs of patients with psychiatric mental health issues may need to be evaluated for factors contributing to sleep disturbance. Factors influencing sleep include age, gender, and the presence of a sleep disorder. Patients diagnosed with psychiatric disorders may experience difficulty sleeping due to symptoms of their psychiatric illness or medical co-morbidities (Fong & Wing, 2007); mood, anxiety, and substance abuse disorders contribute to sleep disturbance, hindering patients' return

to typical functioning. Interestingly, co-morbid medical conditions such as sleep apnea and restless leg syndrome may also contribute to psychiatric disorders and symptoms (Epstein & Harvard, 2013). For some patients, recovery can be complicated by sleep disturbance, especially if other co-morbid issues such as pain and chronic disease are also present, hampering treatment (Hirschfeld & Weissman, 2002).

### **Purpose Statement**

According to the CDC, sleep hygiene is the promotion of habitual sleep (2013). The National Sleep Foundation noted that Sleep Hygiene is an assortment of distinctive practices that are important to have quality sleep and full daytime sharpness (Thorpy & Yager, 2003). The purpose of this project was to develop an educational sleep hygiene program that teaches nurses to identify the factors that contribute to sleep disturbance and utilize non-pharmacological interventions to assist patients with sleep during hospitalization.

### **Literature Review**

Utilizing an evidence-based approach, a literature review was initially conducted by two Point Loma Nazarene University (PLNU) students during a project to explore the relationship between sleep disturbance and design potential interventions to improve the likelihood of sustained, restful sleep.

Sharp Mesa Vista (SMV) is a psychiatric hospital in San Diego, California, that provides inpatient and outpatient services for patients of all ages. Seven inpatient units comprise this psychiatric facility. Because SMV was the location chosen to conduct the educational program evaluated in this project, the literature was also searched for research on sleep disturbances among children, adolescents, adults, and older adults with psychiatric diagnoses, as these patient populations are served at the healthcare facility.



The CINAHL, PubMed, Medline Plus, PsychINFO, and PsychARTICLES databases were searched for research related to sleep disturbance and sleep hygiene in the psychiatric setting. The search included the following keywords and phrases: *sleep hygiene, sleep disturbance in the psychiatric setting, psychiatric disorders, and sleep, sleep in child/adolescent populations, adults and sleep disturbance, the elderly and sleep disturbance, children and adolescents with psychiatric disorders, correlations between sleep disturbance and mental illness, and mental illness in children and adolescents.*

### **Sleep Disturbance in Children**

The National Sleep Foundation (NSF, 2005) suggests children ages 5-10 should have approximately 10-11 hours of sleep each night. Sleep disorders in children may be difficult to diagnose and may escape detection until adolescence or adulthood. Factors affecting difficulty sleeping in this patient population include environmental factors such as lighting, room temperature, lack of a sleep routine, and exposure to electronic devices. The effects of sleep disturbance in children may be exhibited by daytime drowsiness, decrease in academic ability, and impulsive behavior. Children with anxiety may exhibit nightmares, inability to sleep by themselves, and a marked difficulty in falling asleep (Alfano & Gamble, 2009).

### **Sleep Disturbance in Adolescents**

The NSF (2005) recommends adolescents ages 11-18 obtain 8.5 to 9.25 hours of sleep per night. Adolescents with a psychiatric diagnosis such as depression are vulnerable to increased symptomology related to sleep disturbance.

A comparative study of adolescents ranging from 12-18 years of age evaluated the sleep quality of 56 youths with no health complications and 59 youths with complaints of chronic pain and collected data measuring sleep hygiene, depression, and insomnia symptoms. Adolescents

with chronic pain reported a lower quality of sleep and a sleep disturbance rate of 54.2% in contrast to healthy adolescents, who reported a sleep disturbance rate of 19.6% ( $p < .001$ ; Lewandowski et al., 2011).

A form of sleep disturbance exhibited by adolescents is excessive sleeping or hypersomnia. In hypersomnia an individual may sleep more than the recommended hours for the age group and have difficulty waking. Difficulty sleeping increases the risk for decreased levels of function in academics, as well as lower social and familial participation (Alfano & Gamble, 2009).

### **Sleep Disturbance in Adults**

By the time individuals reach adulthood, that is, age 18 years and older, the recommended amount of sleep drops to 7-9 hours (National Sleep Foundation, 2005). Sleep disturbance in this population may trigger current symptoms or cause the onset of new psychiatric illnesses, placing patients at risk for a relapse of anxiety, mood, and substance abuse disorders. Sleep disorders are common for some older adults, which may affect their quality of life. For this paper, older adults (age 65 and older) are identified as those eligible for full retirement according to the Social Security Administration (2012).

A year-long study conducted by the National Institute of Mental Health Epidemiologic Catchment Area queried a sample of 7,954 people in the general population. On initial survey, 10.2% of participants met the criteria for sleep disturbance and 3.2% for hypersomnia. Upon conclusion of the survey, 46.5% of those reporting sleep disturbances met the criteria for a psychiatric disorder (Ford & Kamerow, 1989).

For older adults who suffer from a psychiatric illness along with nighttime sleep disturbance, the combination may produce daytime symptoms such as drowsiness and decreased

energy and alertness. Patients suffering sleep disturbance are at risk for decreased cognitive awareness of their surroundings, inability to attend programs or therapies, and increased risk of falling (Lewandowski et al., 2011).

### **Sleep Disturbance Assessment**

According to the *Journal of Clinical Sleep Medicine*, the evaluation of sleep disturbance should be completed upon patient admittance to each unit. A thorough history of the factors that may add to the patient's sleep disturbance—including bio-psychosocial factors, predisposing influences, list of current medications, and perpetuating circumstances such as habits—must be compiled. In addition, co-morbid medical issues, substance abuse, psychiatric conditions, learned negative sleep behaviors, and cognitive distortions that may interfere with sleep should be assessed. Identifying negative sleep behaviors and cognitive processes such as negative thought patterns reveals information to assist with appropriate diagnosis and treatment of patients with sleep disturbance related to psychiatric disorders (Broch et al., 2008).

Initial assessment of sleep disturbance can be obtained through self-administered questionnaires, symptoms checklists, and psychological screening tests. A psychiatric interview and medical examination may facilitate the identification of co-morbid disorders. A list of medications currently taken by the patient can also be a helpful tool when ruling out sources of sleep disturbance (Broch et al., 2008).

### **Side Effects of Medications**

Patients with psychiatric diagnoses may also experience sleep disturbances due to the side effects of their medications. Mood and anxiety disorders are sometimes treated with antidepressants, anxiolytics, and mood stabilizers (National Institute of Mental Health, 2008), but antidepressants such as selective serotonin reuptake inhibitors can contribute to sleep

disturbances. Medications recognized to treat bipolar disorder (mood stabilizers, anticonvulsants, and antipsychotics) are noted to have side effects such as dizziness, weight gain, drowsiness, and toxicity (Lehne, 2009), and some include sleep disturbance as a side effect. Additionally, stimulants such as caffeine, decongestants such as pseudoephedrine, narcotic analgesics such as Oxycodone, cardiovascular medications such as beta blockers, asthma medications such as Albuterol, and some sleep medications can all influence an individual's ability to sleep (Bjorvaten & Fetveit, 2009; Lehne, 2009).

### **Interventions**

It is important to identify and modify behaviors, medications or other substances that have a significant impact on sleep. Sleep disturbance can not only worsen medical co-morbid problems but can also deteriorate or worsen psychiatric issues, increasing the risk for suicide and substance abuse (Epstein & Harvard, 2013).

A combination of behavioral and psychological strategies in conjunction with pharmacological treatment may be a more inclusive approach to managing sleep disturbance. Pharmacological treatment should be accompanied by patient education on goal expectations, safety concerns, potential side effects, drug/food interactions, and other treatment modalities (Broch et al., 2008).

### **Theoretical Framework**

The recovery model developed by Mary Ellen Copeland is the theoretic framework chosen for this project. Patients with new onset and chronic psychiatric illness must adapt to changes within themselves, their lifestyle, and their environment. Recovery allows patients to continually progress toward goals and regaining independence (Copeland, 2013). The five components of the recovery model are *hope, empowerment, self-responsibility, connection, and*

*building a meaningful life* (Substance Abuse and Mental Health Services Administration [SAMHSA], 2003). *Hope* is about the patient reaching for goals and believing recovery is possible (Copeland, 2001). *Empowerment* is described as the process through which the patient learns to self-advocate or manage aspects of his or her care. In *self-responsibility* the patient continues to move toward independence by setting individualized treatment goals that ultimately place the patient at the center of his/her own recovery effort (SAMHSA, 2003). *Connection* involves leaving isolation behind and choosing involvement with others. Finally, in *building a meaningful life* patients find the importance of continuing to live a healthy life through an inner analysis of their newfound happiness and the drawbacks of slipping into past habits.

Copeland's Wellness Recovery Action Plan (WRAP; Copeland, 2013) utilizes several methods to help patients develop their own plan of recovery. An important part of the plan is that patients become able to identify negative thoughts or events (triggers) that produce negative emotions and behaviors. Once patients are able to recognize their triggers and responses, the plan offers a shift in perspective, encouraging patients to choose a positive response when confronted with a trigger. Utilizing this approach allows patients to gain a measure of control over negative triggers. With these initial steps in place, patients are assisted to recognize symptoms that indicate their level of functioning has decreased and to consider symptoms that others may have noticed. Early discovery of decreased functioning allows patients to either halt the decline or recognize the worsening of symptoms and seek resources to assist them (SAMHSA, 2003).

### **Methods**

The purpose of this sleep hygiene project was to develop an educational sleep hygiene program focused on teaching nurses to recognize the factors that contribute to sleep disturbance and utilize non-pharmacological interventions to assist patients with sleep during hospitalization.

The project was selected by nurse managers at Sharp Mesa Vista (SMV) who questioned the potential benefits of decreasing sleep disturbance in the inpatient psychiatric setting. After a needs assessment identified current sleep hygiene practices, an educational program with learning outcomes was developed and participants engaged in visual, auditory and tactile learning experiences.

### **Program Development**

Sleep disturbance was presented as the main subject of conversation among nurse managers during the Nursing Council Meeting held at SMV on March 5, 2013. A sleep hygiene program was proposed as an avenue to discover connections and solutions to sleep disturbance concerns. The sleep hygiene project was given to PLNU graduate students under the guidance of a clinical nurse specialist. The project plan included a literature review, a needs assessment, data collection for all units, and recommendations for possible implementation at SMV.

### **Needs Assessment**

A needs assessment was carried out to determine current sleep hygiene promotion practices of SMV inpatient units on each shift. The nursing staff was queried (Appendix A) to investigate observed behaviors and existing interventions to assist patients with sleep disturbance. The units that participated in this project were:

- Comprehensive Adult Program (CAPII) - a locked adult inpatient unit serving adults with chronic, persistent mental illness.
- Child Adolescent Program (CAPIII) - a locked inpatient unit serving children and adolescents with new onset, chronic mental illness and developmental needs.
- Intensive Treatment Program (ITP) – a locked adult inpatient unit serving adults with chronic persistent mental illness who are able to take a greater role in their recovery.

- Intensive Care Unit (ICU) - a locked inpatient unit serving adults newly diagnosed or exhibiting signs and symptoms of acute mental illness.
- East Wing Two (EWII) - an open unit serving adults with chronic or persistent mental illnesses who are able to take a proactive role in the recovery process.
- Chemical Dependency Recovery Program (CDRP) - an open unit serving adults participating actively in recovery from alcohol and substance abuse (detox/rehab).
- Older Adult Program (OAP) - a locked unit serving the needs of the older adult population with both chronic mental illness and diseases related to aging.

Information obtained revealed a diversity of staff feedback related to sleep disturbance. A summary of comments encompassed patients' complaints regarding an inability to stay asleep, difficulty falling asleep, and a prolonged feeling of drowsiness. Several staff members suggested patients had difficulty sleeping because they slept too long during the daytime. Others indicated sleep disturbance was related to patients detoxifying from substances or patients experiencing acute episodes of mania or anxiety. Another perspective was that environmental factors such as nighttime noise, uncomfortable mattresses, snoring patients, or ineffective earplugs contributed to sleep disturbance. An area of concern that surfaced multiple times was inconsistency in the unit's "lights out" and medication administration times.

Observation of staff and of medication administration records revealed that some patients were receiving medications such as Trazodone, Lunesta, and Ambien to assist with sleep. When sleep medications were administered between the hours of 2100 and 0300, the efficacy of the medication was compromised due to the patients' inability to sleep for the recommended time period after medication administration. Patients who woke up during the night requested a second dose of sleep medication and complained of drowsiness and sleepiness the following

morning when their daily schedule resumed. Morning shift staff nurses noticed daytime sleepiness in several patients, which interfered with their ability to attend groups. Some patients consistently slept long hours during the day as a result, which would continue the cycle of sleep disturbance at night (Epstein & Harvard, 2013).

Nurses suggested using alternative sleep hygiene interventions as one solution to patient sleep disturbances. Currently, there are no standardized policies and procedures related to sleep hygiene practices at Sharp Mesa Vista. Each unit has its own version of an evening routine that includes an evening WRAP group. Some units leave the lights on or turn off the lights. Bedside nurses who worked the night shift reported when they arrived for their shift, most patients were already in bed. One unit initiated a Serenity Hour that utilizes aromatherapy (Namni, Kim, & Lao, 2005) and offers snacks. Chamomile tea is also available for patients in all units to aid in the promotion of sleep (Zick, Wright, & Arnedt, 2011).

Sharp Mesa Vista utilizes various electronic medical records (EMRs) to capture patient data that includes patient assessments. Patient assessment data was selected to look for data regarding sleep. Evaluation of the data contained in the EMRs revealed a variation with data collected on patients' sleep patterns. The Behavioral Health Reassessment Screen is one way of capturing sleep data, but it is inconsistent. To capture sleep data on the initial assessment requires selecting various screens and tabs on the screen to locate the area where sleep data may be captured. This is accomplished on the Behavioral Health Initial Assessment by first selecting the Suicide Risk Screen and the Variable Factors tab. To assist with the collection of data regarding sleep, existing data collection methods on SMV EMRs should be modified.



### **Educational Program Description and Delivery**

The sleep hygiene educational program was based on the needs assessment, data collection, and research gleaned from the literature review. To facilitate learning about sleep hygiene, an educational workshop (described in Appendix B) was provided and condensed to meet the needs of the staff members. Educational strategies for the sleep hygiene program were verbal instruction, a posture presentation, return demonstration of aromatherapy, individual testimonies, handouts, and a sleep assessment questionnaire. Participants discussed the benefits of a light snack and/or tea, prayer or meditation, aromatherapy, music therapy, and progressive relaxation.

The educational program strategies engaged the different learning styles (auditory, visual and tactile) of the participants. Verbal instruction consisted of an informal question and answer session to gauge participants' knowledge and comfort levels. This strategy was aimed at auditory learners and encouraged feedback from the participants. Participants were asked to review clinical indications that a patient is experiencing sleep disturbance or share stories of previous encounters with a patient exhibiting sleep disturbance. Peer sharing and storytelling allowed participants to link real-world application of the principles discussed in the presentation to future practice (Billings & Halstead, 2012).

The discussion was paired with learning activities including a PowerPoint presentation, colorful flip cards, and a poster on sleep hygiene to engage visual learners (Appendix C, D, E). These tools helped participants identify non-pharmacologic interventions available to assist patients admitted to the inpatient setting with a sleep disturbance. Visual and tactile learning activities included a demonstration utilizing sleep hygiene items such as lavender and chamomile tea. Paired learning experiences occurred through visual and kinetic representation of applying

non-pharmacologic sleep hygiene products to a volunteer. Hands-on manipulation of the sleep masks, aromatherapy, tea and other learning aids allowed tactile learners to explore. Handouts were given to participants to allow them to record notes while listening to the lecture. Return demonstrations were utilized to assist tactile learners in simulating their approach to proper sleep hygiene (Billings & Halstead, 2012). Teaching and learning strategies that appealed to multiple learning types provided a layered learning approach.

### **Learning Outcomes**

Student learning outcomes were developed to meet the knowledge deficit identified by the needs assessment, and they were designed to be measurable to gauge attainment of the expected outcome (Emerson, 2007). The focuses of this instruction was improved awareness of sleep hygiene and identification of methods for utilizing interventions to decrease sleep disturbance. At the end of the class, students were able to:

1. Utilize a questionnaire about patient sleep patterns to assist patient identification of current sleep practices.
2. Evaluate factors that cause sleep disturbance.
3. Verbalize alternative interventions to utilize to assist patients with sleep hygiene.
4. Provide a return demonstration of aromatherapy.
5. List three activities to engage the patient in the self-management sleep hygiene.

### **Sample Population**

A convenience sample of employees at SMV was selected for this project. Sharp Mesa Vista is a teaching hospital that employs registered nurses, licensed practical nurses, licensed psychiatric technicians, and mental health aides from diverse backgrounds. The sample population reflected a wide range of cognitive abilities, nursing experience, life experience, and

learning abilities. The inclusion criterion for the study was nurses that provide direct patient care at SMV.

### **Setting**

The setting for the sleep hygiene program was a quiet room in the nursing units of the seven inpatient units at SMV. Some of the units were locked and some were open, depending on patients' diagnoses and current acuity level of the unit. The rooms were well lit, with adequate seating and space for hands-on learning activities. To meet the instructional needs, a laptop computer for PowerPoint slides, a copy machine, and hand-held sleep hygiene items such as lavender, healthy snacks, a sleep mask, and chamomile tea were available.

### **Instruments**

This educational workshop was given to inpatient mental health nursing staff to enhance their awareness of sleep hygiene as a recovery-focused self-care strategy for patients. The workshop design included opportunities for participants to learn sleep hygiene practices to utilize with their patients in an inpatient mental health setting. Participants were given a five-question pre- and post-test (Appendix F) to assess their knowledge of sleep hygiene. At the conclusion of the educational training, participants were asked to complete a modified Likert scale evaluation of the usefulness of the workshop (Appendix K).

### **Evaluation**

The sleep hygiene project was intended to supplement Serenity Hour—a program initiated by SMV nurses to assist their patients with sleep—and to establish a standardized unit practice. Project planning included working with bedside nurses to establish sleep hygiene practices specific to each population served by SMV. The project included shift-based

recommendations for each unit, non-pharmacological recommendations based on research, a sleep hygiene tool kit, and a patient tips and tools hand out to assist with sleep.

One goal of this project was to change the nursing perception of sleep hygiene. For a sleep hygiene program to be effective, sleep hygiene must be viewed as a part of a twenty-four hour cycle of care. Each shift, nursing staff had an opportunity to positively impact patient care by assisting with sleep hygiene. Night shift nurses encouraged patients to utilize non-pharmacological methods of sleep hygiene such as aromatherapy, chamomile tea and meditation. Day shift nurses were encouraged to review sleep diaries, monitor daytime napping and encourage participation in groups. Evening shift nurses provided classical music, eye masks, earplugs, and progressive relaxation to promote sleep.

Educational workshops, the PowerPoint presentation, and a poster were given to inpatient mental health nursing staff to enhance awareness of sleep hygiene as a recovery-focused self-care strategy for patients with mental illness and to teach non-pharmacological nursing interventions to assist patients with sleep hygiene. Utilizing the WRAP recovery model principles, nursing staff encouraged patients to adopt self-care practices to promote sleep. The selected setting was appropriate and adequate for the learning activities. Student learning outcomes were based on the needs assessment and literature review. Teaching strategies were selected to appeal to auditory, visual, and kinetic learning styles that promote student understanding. Nursing administration was receptive to the presentation, "Using the Recovery Model in the Development of a Sleep Hygiene Program for Individuals in a Psychiatric Inpatient Setting." They showed interest in the staff comments regarding patient care challenges identified during the needs assessment. The nurses were also receptive, although some were skeptical, specifically regarding which items would be allowed on the inpatient wards due to the potential

for harm to the patients. In addition, there was a lack of buy-in by nurses on other shifts, resulting in lack of consistent administration of the Sleep Hygiene program.

Another goal of the project was to develop better tools in the electronic medical record to improve data collection regarding sleep disturbance. To enhance current data collection practices, a recommendation was made to SMV informatics to include sleep hygiene questions on the behavioral health initial assessment. In addition to the electronic record, a sleep hygiene questionnaire (Appendix I) was established to gather more detailed information regarding sleep disturbance in addition to a daily sleep diary (Appendix J). The participants of the workshop had some concerns regarding distributing multiple handouts to patients, believing patients might lose the handouts.

A final principle of the project was to promote the WRAP recovery model concept of patient self-management. A recommendation was made to change the patient admissions packet, which contained a list of suggestions for activities to promote sleep during their hospital stay, a sleep diary, and sleep questionnaire.

### **Discussion**

This sleep hygiene project utilized PowerPoint presentations, a poster, and workshops to augment the Serenity Hour program initiated by the nursing staff at SMV. The criteria included a cultural shift by nursing staff to develop standardization between the shifts and promote twenty-four hours a day support of sleep hygiene practices utilizing the WRAP recovery model. At the conclusion of the PowerPoint presentation, nursing administration feedback was positive and interest was expressed about staff perception. Following the educational workshop, participants voiced concerns regarding the safety of items such as sleep masks and the potential for

overwhelming patients with additional handouts. Participants did agree the poster was helpful and they should continue to utilize some of the items for sleep hygiene.

To promote the sleep hygiene program and decrease problems, additional training to more participants could have assisted with supporting sleep hygiene practices. Presentation of sleep hygiene practices given at an offsite location with other annual training would have given a greater opportunity for staff members to voice their concerns and introduce additional concepts to enhance the program. The unit practice council is another forum where the sleep hygiene program could have been implemented and evaluated.

Evaluation of the inconsistent results of the sleep hygiene program indicates more research and teaching are needed to promote dissemination and sustainment. Ongoing education, data collection, and resources are needed in addition to a program champion. Ultimately, sleep hygiene may benefit patients who are hospitalized for an extended stay, but it may be less successful with patients who are admitted for a brief period of time.

### **Limitations**

One limitation of the project was the short length of stay for patients. Patients were typically admitted for a brief period of time because psychiatric hospitals utilize a treatment model of acute inpatient stabilization with follow up in an outpatient setting. Another limitation was that one psychiatric hospital with seven units was chosen for this project. Future studies should include a larger sample population at multiple settings. Variables that influenced participation in the project were a) the length of time participants had to attend the workshops, b) the current acuity on unit, c) the time of day the workshop was given, and d) lack of buy-in from nursing staff. The project sessions for the sleep hygiene workshop were completed in a room just outside the ward or on the ward. Workshops were given during each of the shifts (day, evening,

and night shifts), and there were multiple distractions, including that participants often had to leave the sessions to return to work. Another limitation was exclusion from use of some items utilized for sleep hygiene due to patient acuity and continued safety on the unit. One item in particular (sleep mask) was unable to be supplied due to the potential danger to patients.

Additionally, the project was presented to management who identified nurses who worked on the development of the sleepy hygiene program.

Finally, the project is limited by the patient population selection. Only data regarding mental health patients was selected for inclusion in this study. The subjective nature of the methods used may not accurately reflect the collected data. Future studies may include completion of a similar project across multiple areas within a hospital.

### **Conclusion**

A sleep hygiene program represents an additional aspect of care nurses can provide to patients in the inpatient psychiatric setting. It is an opportunity to empower patients to care for themselves and to promote continued self-care guidelines after discharge.

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## Appendix A

**Needs Assessment Questions for Bedside Nurses****Day Shift**

1. Is daytime drowsiness a problem for patients at SMV?
2. Do the patients have a designated time for rest?
3. Are patients encouraged to attend groups and meetings?
4. Is physical activity offered and is the amount adequate for this population?
5. What makes the problem (i.e. daytime drowsiness, increased risk of falls) worse?
6. How would you improve the patient's ability to sleep?

**Evening Shift**

1. Are patients provided access to the television at night?
2. What types of drinks are provided in the evening? Caffeinated beverages?
3. What is the cut off time for the last sleep medication?
4. Do patients have access to snacks prior to lights out?
5. What makes the problem (i.e. lack of sleep, increased risk of falls) worse?
6. How would you improve the patient's ability to sleep?

**Night Shift**

1. Are patients provided access to the television at night?
2. What is the cut off time for the last sleep medication?
3. Are patients allowed access to snacks or tea at night?
4. What do you do if a patient can't sleep?
5. What makes the problem (i.e. lack of sleep, drowsiness, increased risk of falls) worse?
6. How would you improve the patient's ability to sleep?

## Appendix B

**Lesson Plan**

**Course:** Sleep Hygiene

**Unit:** N/A

**Date:** Summer Semester, 2013

**Faculty:** Lisa Hill

**Time:** 10:00 to 10:45

**Academic Goal:**

Minimizing the use of pharmacologic interventions to address sleep disturbance.

**Short-Term Objectives:**

At the end of this class which involves utilizing hands on sleep hygiene items, return demonstration and class discussion, the participants will be able to:

1. Utilize a questionnaire about patient sleep patterns to assist patient identification of current sleep practices.
2. Evaluate factors that reinforce sleep disturbance.
3. Verbalize alternative interventions to utilize to assist patients with sleep hygiene.
4. Provide a return demonstration of aromatherapy.
5. List three activities to engage the patient in the self- management sleep hygiene.

**Content:**

1. Introduce students to the definition of sleep hygiene.
2. Analysis the various factors which contribute to sleep disturbance
3. Explain the importance of the team approach when working with patients struggling with sleep disturbance.

4. Discuss the benefits of a recovery based approach to sleep hygiene.
5. Differentiate between non-pharmacological and pharmacological methods of assisting patients to sleep

**Instructional Strategies:**

1. PowerPoint and colorful handouts presented in a clear organized format for visual learners.
2. Providing a speaker who recalls lessons learned from experiences on the locked unit for auditory learners.
3. Demonstration of utilization of progressive relaxation for tactile and auditory learners.
4. Hands on application of sleep hygiene products for tactile learners.
5. Questions to probe knowledge of sleep hygiene and using interactive lecturing.
6. Class discussion to increase understanding of sleep hygiene.

**Anticipatory Set:**

None

**Assessment** (How will the instructor and student identify the learning occurred?):

1. Return demonstration.
2. The student's ability to list 3 examples of non-pharmacologic interventions to use for sleep hygiene.
3. Muddiest point (McKeachie 2011). Also, not sure what this means. Please explain.

## Appendix C

## PowerPoint Presentation Notes

# Using the Recovery Model in the Development of a Sleep Hygiene Program for Individuals in a Psychiatric Inpatient Setting

By  
*Lisa Hill, RN*



## Description of Setting



- A quiet room on each of the seven the inpatient nursing units at Sharp Mesa Vista (SMV)
- Adequate lighting and floor space and seating with a table for hands-on learning activities
- To meet instructional needs
  - a laptop computer for PowerPoint slides
  - a copy machine

## Participants

### Sample Population

- A convenience sample of SMV employees will comprise the sample population for this project.
- The sample population reflects a diverse range of cognitive abilities, nursing experience, life experience, and learning abilities.
- Participants come from a variety of backgrounds:
  - registered nurses
  - licensed practical nurses
  - licensed psychiatric technicians
  - mental health aides

## Needs Assessment

- Included a questionnaire
- Feedback included patient comments regarding sleep difficulty
- Staff observation of daytime drowsiness and naps
- Patients detoxifying from substance abuse
- Environmental factors
- Medication administration
- Limitations of physical activities



## Results of Needs Assessment

- Medication administration could occur between the hours of 2100 and 0300
- Morning shift staff nurses noticed daytime sleepiness in several patients
- Currently, there are no standardized policies and procedures related to sleep hygiene practices at SMV
- Each unit has its own version of an evening routine
- One unit has initiated a Serenity Hour, which included utilization of non-pharmacologic measures to assist with sleep
- Variations in the documentation of sleep habits

## Content

- Introduce participants to the definition of *sleep hygiene*
- Analyze the various factors that contribute to sleep disturbance
- Differentiate between non-pharmacological and pharmacological methods of assisting patients to sleep
- Explain the importance of the team approach when working with patients struggling with sleep disturbance
- Discuss the benefits of a recovery-based approach to sleep hygiene



## Sleep Disturbance

The Centers for Disease Control and Prevention (CDC) recognize sleep disturbance as difficulty falling asleep and remaining asleep and early awakening with an inability to return to sleep (2012).



## Prevalence and Sources of Sleep Disturbance

- Sleep disturbance affects an estimated 70 million Americans
- Stimulating effects of psychotropic and other medications
- Medical disorders and underlying primary sleep disorders
- Irregular schedules and maladaptive habits and routines
- Sleep apnea can present with insomnia complaints
- Restless leg syndrome and periodic limb movements

(AASM, 2010)

## Insomnia and Psychiatric Disorders

Sleep affected by psychiatric illnesses

- Anxiety and mood disorders
- Major depression and dysthymic disorder
- Bipolar disorder (both depressive and manic episodes)
- Panic disorder, post-traumatic stress disorder
- Generalized anxiety disorder and social phobia.

(JAMA, 1989)



## Pharmacological Interventions



## Treating Insomnia

Two-pronged approach

- Pharmacological interventions
- Non-pharmacological interventions



## Antidepressants

- Unreliable for improving nighttime sleep and daytime alertness
- Sedating antidepressants: amitriptyline, trazodone, and mirtazapine
- Residual sedation may occur the following day
  - Caution is advised with Trazodone (Ford & Kamerow, 2000)



## Hypnotic Agents

- Hypnotics are prescribed concurrently with antidepressants
- Utilized for mood and anxiety disorders
- Benzodiazepine hypnotic agents include:
  - estazolam, flurazepam, quazepam, temazepam, and triazolam and
- Nonbenzodiazepine agents
  - zaleplon and zolpidem



## Nonpharmacological Interventions



## Nonpharmacological Treatment of Insomnia

### Psychiatric Setting

#### Develop positive sleep habits/routines

- Decrease electronic stimulants
- Schedule manipulations
- Environmental influences
- Avoidance of stimulating substances/activities
- Behavioral interventions
- Relaxation and meditation practice
- Physical activity

## Establish Sleep Hygiene Guidelines

- Sleep only as much as needed to feel refreshed the following day
- Have a routine wake-up time seven days a week
- Avoid caffeine 4-6 hours before bedtime
- Avoid nicotine before bedtime
- Sleep medications temporarily
- Exercise/hot bath
- Avoid daytime napping
- Light snack at bedtime only

(Navy and Marine Corps Public Health Center)

## Collective Approaches to Sleep Hygiene

### Collective Approaches

- Applicable to a broad range of patients
- Include sleep hygiene practices
- Decrease factors that reinforce chronic insomnia
- Cognitive and behavioral interventions
- Medications
  - Used concurrently with specific treatment strategies for psychiatric disorders.

(JAMA, 1989)



## Research Findings to Assess and Treat Insomnia

- Document history of sleep disturbances
  - Assess current sleep patterns
  - Epworth Scale, two-week sleep diary
  - Patient education
  - Non-pharmalogical interventions
  - Pharmalogical interventions
  - CPAP machine if appropriate for the unit
- (Avidan, 2005 [Level I])

## 24-Hour Sleep Hygiene Plan of Care

- Sleep hygiene is the responsibility of every shift
- Each shift can make positive contributions to promote comfort and sleep for patients
- Day shift
  - Review sleep diary: Encourage the patient to keep a record of sleep habits in a sleep diary
- Evening shift
  - Cessation of caffeine 4-6 hours prior to bedtime. Promote consumption of alternative beverages such as herbal tea rather than caffeinated, stimulating foods and beverages
- Night shift
  - Healthy Snack: Support the patient to choose a light healthy snack, such as fruit, crackers, or herbal teas to promote sleep.

## Individualized Interventions

- Non-pharmalogical care offered first
- Pharmalogical options given early in the evening
- Individualized plan of care to promote sleep
- Encourage patient ownership of establishing a sleep routine
- Sleep group similar to medication groups

## Recovery-Based Approach to Sleep Hygiene



## Patient Ownership of Caring for Self

- Encourage patient to document history of sleep patterns
- Add sleep questions to intake interview
- Patient-recorded Sleep Diary
- Patient education
- Soft music and lower lighting prior to lights out

## Support Patient Sleep Hygiene Activities

- Provide a patient handout with intake package, "What to Do if I Can't Sleep"
- Sleep mask for open units
- Discreet use of flashlights
- Warm shower
- Progressive muscle relaxation

## Student Learning Outcomes

Student will be able to:

- Utilize a questionnaire about patient sleep patterns to assist patient identification of current sleep practices
- Evaluate factors that reinforce sleep disturbance
- Verbalize alternative interventions to utilize to assist patients with sleep hygiene
- Provide a return demonstration of aromatherapy
- List three activities to engage the patient in the self-management of sleep hygiene

## Teaching and Learning Strategies

Visual learners:

- Handouts in bullet format
- PowerPoint
- Pre- and post-test
- Colorful poster

Auditory learners:

- Speaker, recalled lessons learned from experiences with sleep disturbance
- Questions to probe knowledge of sleep hygiene

Tactile learners:

- Lavender for aromatherapy
- Healthy snacks
- Sleep mask
- Chamomile tea

Staff member demonstration of method used for aromatherapy.

## Evaluation

- Post-test
- Discussion
- Clarification of unclear material

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## Appendix D

## Flip Cards

10/14/14

*Lavender*



*Lavender facilitates restful sleep.*

**How it works:**

- When lavender is used through aromatherapy, it helps to reduce heart rate, blood pressure, and it promotes drowsiness.

**Directions:**


- Use aerosolized lavender to spray pillows or bedding prior to retiring to bed for the evening.
- Lavender essential oil drops may be placed on wrists, forehead or cotton balls.

**Aromatherapy**

- **Order Lavender drops through Patti in the pharmacy. Phone extension 8488.**
- Fujii, M., Hatakeyama, R., Fukuoka, Y., Yamamoto, T., Sasaki, R., Moriya, M., Kanno, M., & Sasaki, H. (2008). Lavender Aroma Therapy for Behavioral and Psychological Symptoms in Dementia Patients. Japan's Geriatric Society.
- Namni, G., Kim, H., & Lao, R. (2005). An olfactory stimulus modifies nighttime in young men and women. *Chronobiology International*, 22(5), 889–904. doi: DOI: 10.1080/07420520500263276

10/14/14

## Classical Music



**Music assist with relaxation.**

**How it works:**

- > Classical music can be a complimentary non-pharmacologic intervention to assist with relaxation in the inpatient setting.
- > Effects of classical music include decreased blood pressure, stress, and anxiety.

**Directions:**


- > As part of an evening sleep routine, utilize a listening device programmed with classical music to promote relaxation.

## Classical Music

- *Contact recreational therapy for access to music and CD player. Music is available on the Television, Sharp Channel. An I-pad or YouTube may also be utilized.*
- Bloch, B., Reshef, A., Yadas, L., Haliba, Y., Ziv, N., Kremer, I., & Haimov, I. (2010). The effects of music relaxation on sleep quality and emotional measures in people living with schizophrenia. *Journal of Music Therapy*, 47(1), 27-52.
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- Salamon, E., Bernstein, R., Kim, S., Kim, M., & Stefano, G. (2003). The effects of auditory perception and musical preference on anxiety in naive human subjects. *Medicine Science Monitor*, 9(9), 396-399.
- Lawson # :

10/14/14

## Progressive Relaxation



*A relaxed mind and body helps promote sleep.*

**How it Works:**

- >PMR involves tensing and relaxing muscle groups in the body.

**Directions:**

- >Lay flat on your back in bed or on a mat. Systematically tense and release the muscles of the lower body progressing to the upper body.
- >Lay flat on your back in bed or on a mat. Follow the instructions of a progressive relaxation CD.

## Progressive Relaxation

- *Follow a progressive relaxation script if in a group setting or Contact recreational therapy for access to music and CD player. An I-pad or YouTube may also be utilized.*
- Bogdan, A., Balázs, R., & Lupu, V. (2009). Treating primary insomnia: A comparative study of self-help methods and progressive muscle relaxation. *Journal of Cognitive and Behavioral Psychotherapies*, 9(1), 67-82
- Kemper, K., Bulla, S., Krueger, D., Ott, M., McCool, J., & Gardiner, P. (2011). Nurses' experiences, expectations, and preferences for mind-body practices to reduce stress. *BMC Complement Altern Medicine*, 11(26), 1-47. doi: 10.1186/1472-6882-11-26.

10/14/14

## Chamomile Tea



*Chamomile is a long-time home remedy for relaxation & sleep...*

How it works:

➤ The relaxing properties of chamomile are contributed to flavonoids, which have a sedating effect, promoting relaxation.

Directions:

➤ Place tea bag in mug.

➤ Add hot water; let steep for 1-2 minutes and serve.

➤ Chamomile is also available as an essential oil which can be applied topically.

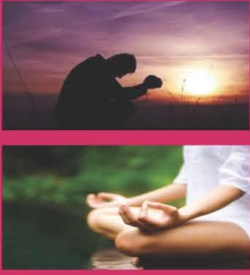
## Chamomile Tea

- *Order chamomile tea from the cafeteria.*
- Amsterdam, J., Li, Y., & Shults, J. (2009). A randomized, double-blind, placebo-controlled trial of oral matricaria recutita (chamomile) extract therapy of generalized anxiety disorder. *Journal Clinical Psychopharmacology*, 29(4), 378-382.
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10/14/14

### Prayer / Meditation



**How it Works:**  
Utilizing prayer, mindfulness and meditation to focus on the present may reduce negative thoughts and emotions, promoting a relaxed state.

**Directions:**  
Find a quiet place to sit alone, close your eyes and begin to focus on the present moment. Object of focus may be a scripture from the bible, a saying or an image.

### Prayer/Meditation

- *Each person follows their own practice.*
- Kemper, K., Bulla, S., Krueger, D., Ott, M., McCool, J., & Gardiner, P. (2011). Nurses' experiences, expectations, and preferences for mind-body practices to reduce stress. *BMC Complement Altern Medicine*, 11(26), 1-47. doi: 10.1186/1472-6882-11-26.
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10/14/14

### Warm Blanket



**How it Works:**

- > Patient comfort level may be increased with the utilization of warm blankets.
- > Providing a warm blanket assists with environmental conditions which may be chilly for some patients.

**Directions:**


- > Warm blankets in a range between 110 and 160 degrees.
- > Apply to the patient's body with the top sheet as a barrier between blanket and patient.

### Warm Blanket

- *Warm blanket in the microwave for 1 minute.*
- Bujdos, P. (2009). Blanket warming: Comfort and safety. *AORN Journal*, 89(40), 714-722
- Robinson, S., Weitzel, T., & Henderson, L. (2005). The sh-h-h-h project non-pharmacological interventions. *Holistic Nursing Practice*, 19(6), 263-266.

10/14/14

### Control Environmental Stimulus




*Sleep is essential to your health.*

How it Works:

- When your brain senses pure darkness, it causes the production of melatonin, the chemical of sleep. To induce this state, you can also use earplugs. When you block out both noise and light, your chances of falling asleep are improved.

Directions:

- Get in bed, close your eyes, and place a sleep mask over your eyes.
- Follow directions on package for inserting earplugs.




### Sleep Mask/Ear Plugs

- *Ear plugs are ordered by unit clerk. Sleep mask will be specially made for Sharp.*
- Hu, R., Jiang, X., Zeng, Y., Chen, X., & Zhang, Y. (2010). Effects of earplugs and eye masks on nocturnal sleep, melatonin and cortisol in a simulated intensive care unit environment. *Critical Care*, 14(2),
- Richardson, A., Allsop, M., Coghill, E., & Turnock, C. (2007). Earplugs and eye masks: do they improve critical care patients. *Nursing in Critical Care*, 12(6), 278-86.

10/14/14

## Healthy Snack



If you can't get to -- or stay -- asleep, there may be a food connection...

How it Works:

- > Snacks rich in carbohydrate increase the level of sleep inducing tryptophan.
- > Tryptophan promotes sleep and a relaxed state.

Directions:


- > Pick a carbohydrate filled snack, nothing too heavy but just enough to make you satisfied.

## Healthy snacks

- *Order from the cafeteria.*
- Spring, B., Chiodo, J., & Bowen, D. (1987). Carbohydrates, tryptophan, and behavior: A methodological review. *the American Psychological Association, Inc.*, 102(2), 234-256. doi: 0033.2909/87/J00.75
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10/14/14

## Shower



Taking a warm shower and then going to bed helps the body.

How it Works:

Exiting a warm shower into a room with a cooler temperature will slightly decrease body temperature. This drop in temperature triggers a tranquil, drowsy feeling by slowing down essential metabolic activities.

Directions:

Take a warm shower for approximately 10 minutes, wash, rinse, get out. Put on night garments and lay down in bed, close your eyes.

## Shower

- *Provide adequate time and towels for patients who are able to shower independently and safely.*
- Ellis, C., Lemmens, G., & Parkes, D. (1995). Pre-sleep behavior in normal subjects. *Journal of Sleep Research*, 4(4), 199-201.
- Sloane, P., Hoeffe, B., Mitchell, C., McKenzie, D., Barrick, A., Rader, J., Stewart, B., & Talerico, K. (2004). Effect of person-centered showering and the towel bath on bathing-associated aggression, agitation, and discomfort in nursing home residents with dementia: A randomized, controlled trial. *Journal of the American Geriatrics Society*, 52(11), 1795-804.

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Appendix E


Sleep Hygiene Poster



## Sleep Hygiene Principles

Sharp Mesa Vista Hospital

Lisa Hill RN BSN



### Sleep Hygiene

The Centers for Disease Control and Prevention (CDC) define sleep disturbance as difficulty falling asleep, remaining asleep, unintended early awakening and/or an inability to return to sleep (CDC, 2012).

Sleep hygiene consists of a series of non-pharmacologic practices that may be used alone or in conjunction with pharmacologic interventions to assist. Individuals with sleep disturbance achieve better sleep (Brown et al., 2002).

Sleep hygiene includes behavioral practices and environmental activities that take place throughout the morning, afternoon and evening to improve sleep quality and quantity (Thorp & Tapes, 2003).

Educating individuals with mental illnesses regarding sleep hygiene practices, provides an opportunity to introduce self care practices that can be utilized at home after discharge from the inpatient setting.

Utilizing the recovery model with the practice of sleep hygiene reinforces an individual's ability to self manage their own care (Copeland, 2001).

**Why is this Important?**


Sleep disturbance affects an estimated 70 million Americans (American Academy of Sleep Medicine, 2010).

Sleep disturbance is a significant public health matter, necessitating definitive diagnosis and treatment (JCSM, 2008).

Psychiatric and medical co-morbidities may be exacerbated by lack of sleep, potentially prolonging hospitalizations (Hirschfeld & Weisman, 2002).

In the older adult population, sleep disturbance is a contributor to the risk of falls.


Sleep hygiene is essential for the body to rest, recover and repair (Barber & Kunz 2010).



### Expected Outcomes

Expected outcomes of non-pharmacological interventions include the promotion of restful, prolonged sleep and the establishment of productive sleep hygiene practices.

#### Alternative Nursing Interventions to Promote Sleep



Alternating with using:

- **Aroma therapy**  
Aroma therapy, specifically lavender reduces heart rate and blood pressure while increasing drowsiness (Nanni, Kim, & Lao 2005).
- **Sleep masks, ear plugs and warm blankets**  
Sleep masks, ear plugs and warm blankets, promote a comfortable, environment by decreasing stimuli, and providing warmth; techniques that have demonstrated the ability to promote drowsiness and induce sleep. (Richardson, Allsup, Coghlin, & Turnock, 2007).
- **Chamomile tea**  
Drinking chamomile tea is associated with an increase in urinary levels of glycine, an amino acid that acts as a nerve relaxant, which may also explain why the tea seems to act as a mild sedative (Journal of Agricultural and Food Chemistry, 2005).
- **Classical music**  
Utilization of Classical music prior to retiring for the evening will lower stress, promote relaxation and will decrease the use of sleep medications (Niet, Tiemens, Lendemeijer, & Hutschmeekers, 2009).
- **Chamomile Tea**  
Chamomile Tea: Patients given chamomile tea will have fewer instances of sleep disturbance (Srivastava, Shankar, & Gupta, 2010).
- **Healthy Snack**  
Consuming a light and healthy snack with carbohydrates can increase tryptophan induced sleep (Peshkari, Silvola, & Korpela, 2012).
- **Progressive relaxation**  
Progressive Muscle Relaxation promotes a relaxed state by decreasing muscle tension in the body (Bogdan, Balazsi, & Lupu, 2009).

**Other interventions include:**

- **Progressive relaxation** guided imagery
- **Sleep kit**

### 24 Hour Plan of Care

#### Daytime Activities

**Develop a sleep plan.** For example, help the patient establish a structured, consistent time to rise and retire each day.

**Discuss sleep.** Ask the patient to describe the quality and quantity of sleep each during during a 1:1 interaction.

**Review sleep diary.** Encourage the patient to keep a record of sleep habits in a sleep diary. Assist the patient in evaluating what promoted sleep, and what hindered sleep. Support the patient in setting and/or renewing a goal for achieving sleep (Broch, et al 2008).

**Discourage napping during the day.** Limit any naps to 30 minutes or less. Discourage napping after 1pm (Epstein & Harvard, 2013).

**Encourage group attendance and regular activities:** Support attendance at daily therapeutic activities to provide structure, promote learning and encourage support of peers.

**Establish a healthy sleep recovery group:** Promote attendance to healthy sleep recovery groups to provide peer support, sharing of experience and ideas and promote self responsibility, empowerment and hope.

#### Evening Activities

**Decrease lighting an hour prior to lights out:** Support the patients in observance of quiet time. Allow time in the treatment schedule to transition to night routine. (Cincinnati Children's Hospital Medical Center, 2012).


**Promote a quiet environment:** Encourage patients to shut down non-essential electronic distractions such as the television, video games and cell phones.

**Cessation of caffeine 4-6 hours prior to bedtime.** Promote consumption of alternative beverages such as herbal tea rather than caffeinated, stimulating foods and beverages.

**Decrease rigorous physical activity up to 2 hours prior to bedtime.** Encourage patients to participate in stretching and progressive relaxation (Bogdan, Balazsi, & Lupu 2009).

**Create a sleep kit:** support patients to gather items for a sleep kit to induce a soothing environment. Include items such as sleep mask, ear plugs, and blankets, to assist with regulating environmental factors such as noise, lights and temperature (Richardson, Allsup, Coghlin, & Turnock, 2007).

**Promote a set of habits or establish a routine to assist with sleep.** Support patients to include herbal tea, prayer or meditation and aromatherapy (Nanni, Kim, & Lao 2005).




### Night Time Activities

**Encourage patients who experience interrupted sleep patterns to repeat sleep hygiene practices such as:**

**Re-introduce sleep kit items:** support patients to select their favorite items from their sleep kit to induce a restful environment. Include items such as aromatherapy, sleep masks, ear plugs, and blankets, to assist with regulating environmental factors such as noise, lights and temperature (Richardson, Allsup, Coghlin, & Turnock, 2007).

**Classical music:** encourage patients to use classical music to lower stress and promote sleep. (Niet, Tiemens, Lendemeijer, & Hutschmeekers, G. 2009).

**Healthy Snack:** Support the patient to choose a light healthy snack, such as fruit, crackers or herbal teas to promote sleep.



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Appendix F

**Pre- and Post-Sleep Hygiene Questions**

1. What is sleep hygiene?
2. What shift is responsible for promoting sleep hygiene?
3. What are the effects of sleep disturbance?
4. Are there factors which affect a person's ability to fall asleep?
5. Are medications the sole or only solution for helping patients sleep?

## Appendix G

**Non-Pharmacological Interventions****During the Day Shift**

1. Discourage day time napping.
2. Limit daytime nap to 30 minutes only.
3. No napping after 1pm.
4. Have the same time for sleeping and rising each day.
5. Establish a healthy sleep group.
6. Review sleep diary during one to one interaction with patients.

**During the Evening Shift**

1. Cessation of caffeine 4-6 hours prior to bedtime.
2. Recommend cessation of nicotine 1.5 hours before bedtime.
3. Decrease lighting an hour prior to lights out to encourage quiet time.
4. Encourage Healthy Sleep group attendance or add sleep questions to the Wrap Up.
5. Stretching/ progressive relaxation.
6. Warm shower to assist with relaxation.
7. Light snack that is low in sugar prior to bedtime.
8. Herbal teas.
9. Aroma therapy.
10. Offer medication if it is ordered.

**During the Night Shift**

1. Herbal tea.
2. Aroma therapy.
3. Snack.
4. Ear plugs.
5. Warm blanket.
6. Waffle mattress.
7. Discussion if the patient needs to talk.
8. Reading or activity until patients feel like they can go back to sleep.

## Appendix H

**Tools and Tips to Assist with Sleep**

1. Sleep hygiene recommendations to be given out with admissions packet
2. Daytime sleep hygiene activities
3. Limit daytime napping to 30 minutes only and no napping after 1pm
4. Encourage activities, arts, crafts, groups, physical activity
5. Have the same time for sleeping and rising each day
6. Attend healthy sleep group
7. Review sleep diaries
8. Ask questions: when do you remember sleeping well?
9. What has helped you to sleep in the past?
10. Cessation of caffeine 4-6 hours prior to bedtime
11. Recommend cessation of nicotine 1.5 hours before bedtime
12. Evening sleep hygiene activities
13. Cessation of caffeine 4-6 hours prior to bedtime
14. Recommend cessation of nicotine 1.5 hours before bedtime
15. Attend healthy sleep group
  - a. Review sleep diaries
  - b. Ask questions: when do you remember sleeping well?
  - c. What has helped you to sleep in the past?
16. Stretching/ progressive relaxation
17. Decreasing lighting an hour prior to lights out to encourage quiet time
18. Warm shower to assist with relaxation
19. Light snack, healthy carbohydrate snack such as fruit prior to bed
20. Something to read
21. Herbal teas
22. Aroma therapy

## Appendix I

**Sleep Hygiene Questionnaire**

1. How many hours do you sleep each night?
2. How would you describe your quality of sleep?
3. Do you have difficulty dropping off to sleep?
4. Do you have difficulty remaining asleep?
5. What makes aids in the decrease of your sleep disturbance?
6. Do you feel rested when you awaken the next morning?
7. Do you have a sleep routine? How long does it take to wind down?
8. Do you take daytime naps?
9. Do you use alcohol or tobacco 4 hours before going to sleep?
10. Are you mentally preoccupied before bed with activities such as worrying, thinking, or planning?
11. Is your sleeping environment uncomfortable (i.e., too hot, too cold, uncomfortable mattress)?

## Appendix J

**Sleep Diary**

Complete in the Morning

	Mon	Tues	Wed	Thur	Fri	Sat	Sun
I went to bed last night at							
I got up this morning at							
I slept for a total of (hours)							
I woke up during the night (#of times)							

Complete in the Evening

	Mon	Tues	Wed	Thur	Fri	Sat	Sun
Number of caffeinated drinks today							
Time of last caffeinated drink							
Exercise completed today (minutes)							
What I did in the hour before I fell asleep							
Mood today? 90=awful, 10=great)							

Retrieved from PSYCHOLOGYT LS <http://psychology.tools>

## Appendix K

**Likert-Type Scale Evaluation of Sleep Hygiene Instruction**

Question	5= Strongly Agree	4= Agree	3= Neither Agree Nor Disagree	2= Disagree	1= Strongly Disagree
1. Was the instruction easy to understand?					
2. Were the objectives met by the instructor?					
3. Will you be able to apply Sleep Hygiene principles to your work setting?					
4. How likely are you to use Sleep Hygiene in your work setting?					
5. Was the environment conducive to learning sleep hygiene principles?					