

Implementation of a Sleep Hygiene Bundle to Reduce Delirium in Adult Oncology Inpatients: An Evidence-Based Practice Project

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PROBLEM STATEMENT

- Sleep disturbance is a common complaint in the oncology population that can lead to increased rates of delirium
- Sleep disturbance is found in up to 75% of patients diagnosed with cancer
- 16% of inpatients admitted to a National Cancer Institute-Designated Comprehensive Cancer Center (NCI-DCCC) were diagnosed with delirium

PROJECT PURPOSE

- The purpose of this Evidence-Based Practice (EBP) project is to develop and implement an evidence-based sleep hygiene bundle to reduce delirium rates in the oncology inpatient population at a NCI-DCCC
- The goal is to have an overall decrease in rates in delirium by 10% in oncology inpatients following the implementation of the sleep hygiene bundle
- In adult oncology inpatients that experience sleep disruptions during their hospitalization, does the implementation of a sleep hygiene bundle based on National Comprehensive Cancer Network (NCCN) guidelines result in concurrent overall decrease in delirium?

MODEL/NURSING THEORY

- The Iowa Model structured the framework for this EBP project.
- Problem-focused triggers included decreased patient satisfaction scores regarding quietness of environment, increased rates of delirium, and a lack of sleep hygiene bundle at the cancer center.
- Knowledge-focused triggers included nursing staff knowledge of sleep hygiene and delirium, implementation of EBP sleep hygiene bundle, and identification of practice standards.
- Kolcaba's comfort theory of nursing was incorporated in the development of this EBP, which emphasizes the importance of all interdisciplinary healthcare professionals creating comfort for patients through holistic methods.

METHODS

Subjects (Participants)

- Inpatients on a 24 bed malignant hematology unit at an NCI-DCCC
 - Exclusion criteria includes patients withdrawing from alcohol, those experiencing sundown syndrome, comfort measures only patients, and patients with acute psychiatric conditions
- 38 Nurses and 18 oncology technicians on a malignant hematology inpatient unit

Setting

- A 206-bed NCI-DCCC located in Tampa, FL
 - The malignant hematology unit primarily cares for patients with a acute leukemia, lymphoma, and multiple myeloma

Instruments/Tools

- Delirium will be measured using the Confusion Assessment Measurement (CAM) short version score
- The CAM has a sensitivity rate of 94-100% and a specificity rate of 90-95%
- Sleep hygiene bundle worksheets will be given to staff to complete each night for each patient.

Intervention and Data Collection

- An EBP sleep hygiene bundle was created based on the NCCN Sleep Disorders Guidelines as well as education regarding sleep and delirium for oncology staff
- Pre-surveys were given to cancer center staff to assess baseline knowledge of delirium and sleep followed by education and post-survey collection
- The sleep hygiene bundle was implemented on the hematology unit. Worksheets were collected at the end of each week during this time
- CAM scores were collected and analyzed to determine effectiveness of intervention

Sleep Hygiene Bundle Worksheet

Room #: _____

Date							
Did the patient have a positive delirium screening?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
Was Delirium IPOC activated?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
Did patient receive sleep hygiene kit?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
Were outside noises limited around patient's room?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
Was mediation or other relaxation techniques used to help promote sleep via the Get-Well Network?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
Was patient care bundled appropriately?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
Was evening care provided to patient?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
If the patient was taking sleep medication at home, did they receive this inpatient?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
Did the patient state they had a good night's sleep the next morning following use of the standard?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N

Were there any reasons the patient may not have received a good night's sleep? (Ex: chemotherapy or out of surgery overnight, alcohol or insomnia history, intra-facility transfer over night)

RESULTS

- The Yale Delirium Prevention trial addressed sleep disturbance with a non-pharmacological sleep protocol which reduced the need for sedatives as well as reduced the number of episodes of delirium (P=0.03).
- Educational in-services with meaningful data have been proven to increase team member knowledge and improve patient care as described by the Clinical Journal of Oncology Nursing .
- It was the authors' goal that utilizing a similar bundle in the oncology population along with team member educational in-services would have had a similar outcome as seen in the literature.

DISCUSSION

- Based off research conducted similar to this EBP project, improved sleep resulting from implementation of a sleep hygiene bundle has shown to decrease not only number of cases, but decrease the total number of days with delirium as well.
- Education and training of staff has been shown to improve care of patients. This has been seen in earlier projects regarding identification of delirium via the CAM score at the Cancer Center. This has continued with education regarding sleep hygiene in the care of hospitalized oncology patients.
- Frequent, face-to-face in-services have shown to be most effective in direct patient care which was the authors' initial plan.

IMPLICATIONS FOR ADVANCED PRACTICE NURSING

- Research supports the use of sleep hygiene bundles to improve sleep disturbances that in turn proved to concurrently reduce delirium in hospitalized patients.
- Addressing delirium through an advanced practice registered nurse led EBP project has the potential to reduce the healthcare system burden that results from delirium experienced during hospitalization of the oncology patient.

SUSTAINABILITY

- This EBP project could be continued in the future through incorporating the sleep hygiene bundle worksheet through the an Interdisciplinary Plan of Care(IPOC) incorporated through the electronic medical record.
- Education regarding sleep hygiene could be incorporated into annual competencies to keep team members up to date on best practice.

REFERENCES



Increased staff knowledge and utilization of a sleep hygiene bundle has proven to reduce rates of delirium in the inpatient oncology population.