

Sleep Hygiene for Delirium Prevention in Neurocritical Care Patients by Sarah Peelen, MSN, AGACNP-BC



Purpose

- To increase implementation of a current evidence-based sleep hygiene bundle in a large academic medical center’s neurocritical care population in order to decrease rates of delirium and improve patient outcomes.

Background

- Delirium is defined as a state of altered level of consciousness often leading to confusion, inattention, and changes to levels of cognition (Baek et al., 2020).
- Risk factors for developing hospital delirium (Nazemi et al., 2017):
 - Age
 - Dementia
 - Use of general anesthesia
 - Long surgeries
 - Polypharmacy
 - Psychiatric disorders
 - Admission to intensive care units (ICU)
- Pre-project observations indicated a practice gap surrounding sleep hygiene and promotion including poor compliance with recommended environmental control measures.

Review of Literature

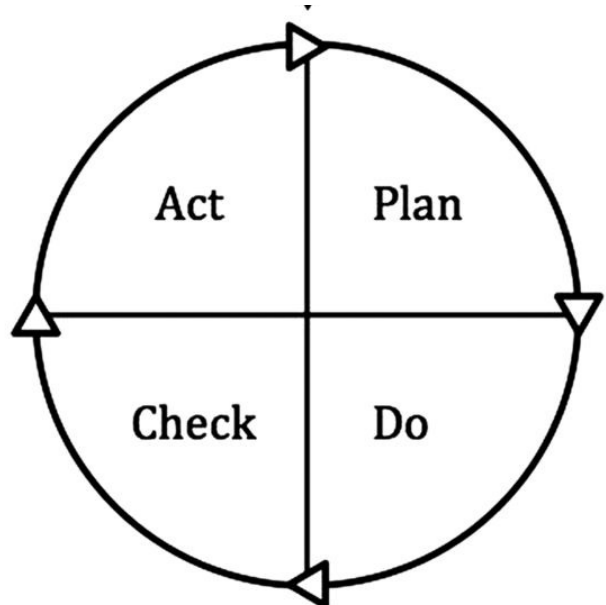
Nonpharmacological interventions	Pharmacological Interventions	Multicomponent interventions
<ul style="list-style-type: none"> • Most commonly recommended • Low-cost and low-risk to the patient (Jun et al., 2021) • Included: environmental control measures, nursing care plan interventions, specific ventilator modes 	<ul style="list-style-type: none"> • Melatonin • Dexmedetomidine • Ramelteon • Propofol • High side effect profiles (Grimm, 2020) • Overall lack of evidence supporting the use of a medication to induce sleep and prevent delirium (Patel et al., 2014). 	<ul style="list-style-type: none"> • Single interventions not as successful as a combination of components (Grimm, 2020) • Multicomponent protocols are shown to decrease rates of ICU delirium (Tonna et al., 2021)

Interventions

- A continuous quality improvement intervention was initiated by a group of advanced practice providers in the neurocritical care population.
- The initiative focused on improved adherence to evidence-based sleep hygiene interventions through the incorporation of “sleep” as a topic into the daily rounding checklist.

Change Process

- Plan:**
- Creation of project team with unit stakeholders
 - Collection of data concerning pre-intervention delirium scores
- Do:**
- Intervention implementation
- Check:**
- Process and outcome measurement
 - Data analysis
- Act:**
- Determine if data supports continued use of the rounding tool and sleep plan



Evaluation with Cost Considerations

- There was no cost associated with the implementation of this DNP Project.
- Effect on delirium positive screens:
 - 44% decrease in the IMU
 - 36% decrease in the ICU
- Limitations
 - Incorrect usage of the delirium assessment tools
 - Low adherence to sleep plan completion
 - Staff turnover rates
- Next steps:
 - Implementation of a project focusing on further adherence to sleep plans
 - Further education for bedside nurses regarding delirium assessment tools

References

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