Increasing Patient Satisfaction in the Inpatient Geriatric Population Through Sleep Promotion

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PICOT Question
Will a project that promotes sleep through non-pharmacological interventions and Melatonin increase patient satisfaction over a seven month period?

Objectives
- Describe the effects of sleep deprivation on the body.
- Explain the importance of promoting sleep among the elderly without the use of sedative hypnotic drugs (SHDs).
- Recommend interventions to promote sleep based on current research and best practice.

Introduction/Background
- Fall of 2014, only 20% of patients on unit were satisfied with the noise level at night per the NRC Picker.
- Literary review revealed 22-61% of hospitalized older patients report problems sleeping.
- Sleep deprivation negatively impacts physical, mental, and emotional health as well as healing.

<table>
<thead>
<tr>
<th>Effects of Sleep Deprivation on the Body</th>
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<tbody>
<tr>
<td>Sleep Loss</td>
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<tr>
<td>Cognition</td>
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<tr>
<td>Fatigue</td>
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<tr>
<td>Immune Response</td>
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<td>Autonomic Dysregulation</td>
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<td>Depression</td>
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<td>Infection</td>
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<td>Cardiac Instability</td>
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<td>Cancer</td>
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- SHDs (benzodiazepines, minor tranquilizers, and antihistamines) were considered the intervention of choice to promote sleep.
- In the elderly, SHDs have been known to cause falls, delirium, and respiratory depression.

Implementation

Project: Sleep Enhancement
- Promote sleep through non-pharmacological interventions and the use of Melatonin.

Setting and Participants
- 22 bed, adult medical telemetry unit in a teaching hospital.
- 40 nurses and clinical technicians.

Methods
- Change vital sign (VS) times from 8, 12, and 4 to 10, 2, and 6 to create a block of time between 10pm and 5am of potentially uninterrupted sleep.
- Between 10pm and 5am: cluster and coordinate care and limit hallway conversations.
- By 10pm: complete routine nightly care, dim hallway lights, assist with bedtime routine, and offer sleep aids (eye masks, ear plugs, and warm milk or decaffeinated tea).
- Wait until 5am to start routine morning care.
- “Sleep Protocol,” physician order set for stable patients with options to: omit 2am VS, hold IV fluids over 5am.
- Treat pain and anxiety.

Measurement Tools
- VS/lab Audits via Electronic Medical Record (EMR).
- NRC Picker.
- Patient Surveys.

Results

<table>
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<tr>
<th>Number of Minutes Uninterrupted by Routine Care (Vital Signs and Lab)</th>
<th>Between 10pm and 5am</th>
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<tbody>
<tr>
<td>Q4hr VS only</td>
<td>383</td>
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<tr>
<td>Q8hr VS only</td>
<td>368</td>
</tr>
<tr>
<td>Q4hr VS with Hold 11pm to 5am</td>
<td>302</td>
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Data Limitations:
- Small sample size from NRC Picker surveys.
- Patient surveys were not random: performed on available and willing patients for one week each month.
- No pre-data for patient perception of sleep quality.
- No pre-data for Melatonin use on the unit.

Project Limitations:
- Implementing all aspects created confusion. Staff thought interventions were only for patients ordered for “Sleep Protocol.”
- Lights did not dim properly until the end of the project.
- Frequent change in physicians due to teaching hospital.

Recommendations
- Roll out project in phases.
- Create a multidisciplinary team of project champions.
- Survey patients prior to project implementation to identify noxious nighttime noises.

Discussion
- Patients on Q8hr VS experienced increased potential sleep time due to change in VS times and limiting unnecessary patient awakenings between 10pm and 5am.
- Both Q4hr VS and Q8hr VS patients experienced increased potential sleep time when placed on “Sleep Protocol.”
- Study unit had the most use of Melatonin during the project than any other unit in the hospital.
- Patients reported no notable improvement in quality of sleep.
- Pain, interruptions, noise, insomnia, and anxiety were reported as the top reasons for poor sleep.
- NRC Picker scores showed no consistent improvement in patient perception of noise at night.

References
- Senior Friendly Hospitals. (2012). Explain the importance of sleep deprivation negatively impacts physical, mental, and emotional health as well as healing.