

In ICU Patients, how does initiating a sleep protocol compare with no intervention affect instances of ICU delirium within patients stay in the ICU/ IMC?

Purpose

To reduce the rate of delirium in ICU patient populations by improving sleep quality through the use of a sleep protocol initiative

Background

Delirium in the ICU is associated with greater mortality and longer, expensive and more complicated hospital stays. Sleep deprivation, caused by multiple night time interruptions, sedative use, and alarms has been linked to an increase in ICU delirium. The Society of Critical Care recommends that all critical care units implement sleep promotion strategies to help combat ICU delirium. A sleep protocol consists of guidelines to help increase quality and quantity of sleep in ICU patients. Currently UM BWMC's critical care unit does not follow a specific sleep protocol.

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Julie Hurley, MSN, RN, CCRN, CNRN
Jaime Van Allen, MS, RN-BC
Jason Heavner, MD
CCW UPC



Summary of Evidence

- Research has shown that implementing different sleep strategies such as eye masks, ear plugs, melatonin, music therapy and designated quiet times can significantly decrease rates of ICU delirium (Litton, 2016) (Donepudi, 2018) (Barr, 2013) (Biren, 2016)
- Significant differences in perception of sleep quality, ease of getting to sleep and duration of sleep were found between those who were given a sleep protocol and those who were not (Hu, 2015).
- In some studies, use of sleep protocols decreased the length of ICU stays (Flannery, 2016)
- Non pharmacological interventions were shown to decrease the need of for sleep inducing medication (Van De Pol, 2017)
- All articles mentioned limitations to their studies based on bias, small sample size, differences in patient diagnosis and confounding variables. More research is needed but all studies agree that a sleep protocol is a cost effective way to potentially improve patient outcomes. (Litton, 2016)(Kamdar, 2016)

Recommendations

- Create and implement a sleep protocol in conjunction with the CCW Unit Practice Council (UPC) using the following recommendations:
 - Rescheduling meds, procedures, lab work, and tests outside a designated 6-hour uninterrupted sleep window
 - Rescheduling nursing and respiratory interventions outside a designated 6-hour uninterrupted sleep window
 - Provide patients with a door sign and the option to use ear plugs, eye mask, headphones, aromatherapy, and/or pharmacological sleep aids.
 - Maximize day and night cues
- Work with physicians to create an exclusion criteria for placing stable patients on the sleep protocol
- Complete an on unit study comparing delirium rates before and after the implementation of the sleep protocol

See provided reference for an example of the suggested UM BWMC sleep protocol

Conclusion

The introduction of a sleep protocol would help improve the quality of sleep in ICU patients, potentially reducing the rates of ICU delirium as well as decrease overall length of hospital stay.