

Evidence-Based Practice Related to ICU Quiet Hours and Delirium

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PICO Question

For adult patients in a critical care setting, does the implementation of quiet hours on the unit decrease incidence of delirium?

Review of Evidence

Barr et al., 2013, clinical practice guideline (I)

Recommendations – decrease illumination and sound, cluster care, decrease stimuli to regulate sleep cycles

Locihová et al., 2017, systematic review (I)

Findings – After implementation of bundle, there was a decreased incidence of delirium with earplugs and early development of delirium decreased by 53%

Moon & Lee, 2015, randomized single control trial (II)

Findings – protocol did not show a decrease in delirium, but did lower 7-day in-hospital mortality rate

Recommendations

Delirium prevention bundle (Grade B)

- ◆ Patient reorientation – every 8 hours
- ◆ Early mobilization
- ◆ Reduce stimulation from light and sound (during 2 scheduled daytime quiet hours and during nocturnal hours) - provide patients with eye masks and earplugs, close patient's door, turn off patient's room lights and dim hall lights, decrease telephone volumes and alarm sounds, cluster patient care and limit to only necessary interventions

Significance

Decreasing the incidence of delirium through implementation of quiet hours in ICUs could potentially lead to shorter hospital stays, decreased hospital costs, and better patient outcomes including decreased mortality.



Search Strategy

- CINAHL, PubMed, and National Guideline Clearing House
- Keywords: “delirium,” “quiet time,” “ICU”
- Research articles included evidence from levels I-VI
- Articles included one clinical practice guideline, one integrative review, one systematic review, one randomized control trial, and three control trials without randomization

McAndrew et al., 2016, prospective study (III)

Findings – no significant decrease in incidence of delirium; some patients who were CAM-ICU positive became CAM-ICU negative (CAM-ICU detects delirium in the ICU population; patients are positive if they have had a change in mental status within the last 24 hours, inattention, and an alteration in level of consciousness or demonstration of disorganized thinking)

van de Pol et al., 2017, interrupted time series analysis (III)

Findings – nocturnal sound reduction protocol led to decreased risk factors for delirium

Patel et al., 2014, quasi experimental study (III)

Findings – decreased stimulation resulted in decreased delirium from 33% to 14%; decreased duration of delirium from 3.4 days to 1.2 days

Elliott & McKinley, 2014, integrative review (VI)

Findings – patients reported improved circadian rhythm through sound and light reduction interventions

Discussion

Implementation of quiet hours in the intensive care unit for adult patients decreased the incidence of delirium. A delirium prevention bundle is recommended as evidence based practice. In order to implement a delirium prevention bundle, health care professionals must be informed of the benefits of implementation of reorientation, early mobilization, and reducing stimulation of light and sound on the intensive care unit.

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