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Noise Reduction in the Intensive Care Unit

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Carolina Gomez

Abstract

The purpose of this study was to analyze the noise levels in an intensive care unit (ICU) in a metro atlanta medical facility and to establish interventions that could be used to reduce the noise. Determining the effects is significant because it can improve a patients' outcome in the ICU. The challenge explored was evidenced by 15 out of 20 patients stating that they are suffering sleep deprivation due to excessive noise levels. After 3 days in the ICU, patients have developed confusion and delirium; they are not oriented to date and time without reminders. After 3 days in the ICU, patients' aggravation levels increased due to sleep deprivation. Through this study, we explored surveys completed by the patients who were admitted to the ICU. In these surveys, 100 patients indicated how disruption of sleep from excessive noise levels impacted their progression. The patients eligible to participate were those who remained in the ICU for 10-20 days. Noise levels were measured using a sound level meter that continuously recorded noise levels in the ICU unit for 6 months. In this study, nurse case managers and registered nurses practicing in the critical care setting were interviewed and were asked to refer back to their documentation. The registered nurses who were participating in this study were asked to monitor the amount of times they disrupted the patients while they were sleeping with alarms and with excessive talking. The registered nurses were additionally asked to implement noise canceling earphones from 10pm-7am. The implementation of noise level meters and noise canceling earphones were listed in an excel sheet by the nurse manager. The goal is for noise level to be reduced by 75% and to increase patient satisfaction regarding noise levels in the department.