

## **NURSING SEDATION PRACTICE IN THE ICU**

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**PURPOSE** - The purpose of this project was to describe the sedation practices of nurses in a cardiovascular intensive care unit (ICU) as demonstrated by sedation assessments charted in the medical record. Of specific interest was the degree to which patients were maintained in an optimal sedation range and whether patient sedation levels were impacted by nurse experience.

**BACKGROUND AND SIGNIFICANCE** - Administering and monitoring sedation is an important component of nursing care in the ICU. Well-managed sedation facilitates patient safety, comfort and treatment outcomes. Suboptimal sedation may prolong mechanical ventilation duration and ICU length of stay. Nurses have considerable autonomy in titrating sedative doses to achieve a desired level of sedation. Sedation levels are assessed using an observation-based assessment tool called the Motor Activity Assessment Scale (MAAS). The scale ranges from 0 to 6 with 0 being unresponsive and 6 being dangerously agitated. The goal of sedation is to have a patient who is calm and easily aroused with an optimal MAAS score of 2 or 3.

**METHODS** - A retrospective review of 31 charts of adult cardiothoracic surgery patients was conducted. Patients were mechanically ventilated and receiving continuous intravenous sedation. All had an end point of successful extubation and transfer from the ICU. No patients had suffered neuromotor complications or were receiving neuromuscular blocking agents. Data collection began 24 hours post surgery and continued until continuous sedation was suspended or patients were extubated. Abstracted data included MAAS and pain scores recorded every six hours, sedative/analgesic doses, and duration of mechanical ventilation. In addition, the initials of the nurse recording each sedation assessment was noted in order to match sedation scores to nurse experience level.

**RESULTS** - The 31 patient charts yielded 374 MAAS scores recorded by 85 nurses. Of this total 22% were scores of 0 or 1, 66% were scores of 2 or 3 and 12% were scores of 4, 5 or 6. Within the sample population, 74% had MAAS scores in the optimal range a majority ( $\geq 50\%$ ) of the time, 26% had scores of 0-1 and  $< 1\%$  had scores of 4-6. In order to examine the correlation between RN experience and recorded sedation assessments, all MAAS scores were broken down into three nurse experience levels ( $<2$  years, 2-5 years and  $>5$  years). Scores recorded by RNs with least experience distributed as follows: MAAS  $<2$  (21%), 2 or 3 (67%) and  $>3$  (12%). Likewise, RNs with 2-5 years had MAAS distributions of 23%, 61% and 16% and RNs with the most experience 22%, 68% and 10% respectively.

**CONCLUSIONS** - A majority of sedation scores were in the target 2-3 range, implying that overall this group of patients was being optimally sedated. However, 27% of patients were consistently outside the optimal range of sedation. Further evaluation is needed to explain the context in which such suboptimal MAAS scores arise. There appeared to be little correlation between nurse experience and distribution of sedation scores, implying that suboptimal MAAS scores were as likely to be recorded by a nurse with  $>5$  years experience as one with  $<2$  years.

