

STANDARDIZED APPROACH TOWARD DAILY AWAKENING FOR THE MECHANICALLY VENTILATED PATIENT

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Purpose and PICO Question

The purpose of this project is to decrease the number of days a patient remains on mechanical ventilation in Critical Care. The question guiding this project is, in the adult patients in critical care requiring mechanical ventilation and sedation of greater than 24 hours, would a standardized approach to safe awakening from sedation with assessment of readiness to wean from ventilator compared to current practice decrease number of days on ventilator? The aim of this project is that patients on mechanical ventilation will require 1 less day on ventilator by August 2009.

Background and Evidence Review

A few years ago John Muir – Concord Campus implemented a VAP (Ventilator Acquired Pneumonia) Bundle. The bundle is comprised of four evidence-based interventions; sedation vacation, elevation of the head of the bed, DVT (Deep Vein Thrombosis) prophylaxis, and peptic ulcer disease prophylaxis. The sedation vacation aspect of the bundle was implemented with no policy or protocol to guide the nurse on how the sedation vacation would be done. An assessment of nursing knowledge and practice regarding sedation vacation was done and discrepancies in the various nurse's responses, indicated a need for a standardized approach toward this intervention. Furthermore, research proved that when a protocol was in place for daily sedation vacation, patients had better outcomes than those patients whose sedation weaning was left to the discretion of the nurse. The evidence showed a decrease in number of days on ventilator, as well as a decrease length of stay in the critical care unit and hospital.

Methods

My project consisted of staff education during routine staff meetings, flyers outlining the change in practice were posted in multiple staff reading areas, and an email with attachment of the same flyer was sent to all staff. The flyer outlined when the sedation vacation would be done, gave a safety criteria for which patients qualified for safe awakening, a failure criteria for inability to wean from ventilator, and for patients that required further sedation to optimally ventilate, the dose of sedation would be resumed at ½ the amount.

Results

The average duration of mechanical ventilation was 3.9 days during the month the change in practice was implemented. The average duration of mechanical ventilation for the quarter prior was 3.7 days, with the month prior to implementation being 3.9 days.

Conclusion

We did not see a reduction of ventilator days with the implementation. This lack of reduction could be due to the fact that data collected was in the same month as implementation of project. It's also possible we were doing better than we originally thought as our baseline data before the change in practice was better than the data describe in the literature by Kress and Girard. Kress and Girard's data without intervention was between 7.3-14.7 days, after intervention was 4.9-11.6.

While our small test of change did not show a reduction in number of days on mechanical ventilation, we now have a standard of practice to guide nurses in this process. In addition, the evidence suggests this intervention is important to early extubation and discharge.

Selected References:

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Key words: VAP bundle, weaning sedation, weaning mechanical ventilation