Oral Defense Announcement
University of Missouri – St. Louis Graduate School

An oral examination in defense of the dissertation for the degree
Doctor of Nursing Practice with an emphasis in Adult Gerontology Nurse Practitioner

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A Standardized Approach to Awakening and Breathing Trials

Date: Thursday, July 08, 2021
Time: 3:25-4:00pm
Place: Remote

Abstract

Problem: Mechanical ventilation with sedation, are crucial co-therapies for the critically ill. Risks of both, known as Ventilator Associated Events (VAEs), can worsen outcomes. Performing Spontaneous Awakening Trials (SATs), with Spontaneous Breathing Trials (SBTs), is a targeted evidence-based strategy in reducing VAE rates. The Intensive Care Unit (ICU) lacked a coordinated approach to operationalizing SATs with SBTs.

Methods: An observational retrospective study involving a review of VAE and patient data for corresponding months in years before, and after an improvement strategy application, and making comparisons. The multimodal strategy includes filling out checklists outlining criteria for performing a SAT with SBT. Checklists were filled from November 13, 2019, to February 26, 2020. The VAE surveillance algorithm, comprising three definition tiers, namely, Ventilator-Associated Condition (VAC), Infection Related Ventilator Associated Complication (IVAC), and Possible Ventilator Associated Pneumonia (PVAP), is applied to assess improvement outcomes. Performance is measured by manually counting completely filled checklists.

Results: Noted improvements, calculated as proportions of ventilator days are, 1) VACs (0.013 and 0.007 for January and February 2019, and 0 for January and February 2020), 2) IVACs (0.007 in February 2019 and 0 in February 2020), and 3) PVAPs (0.005 in January 2019 and 0 in January 2020). Improvements could not be tied to the strategy. A paired samples t-test revealed a significant mean difference in checklists filled versus those not filled ($t(105) = 11.31, p < .001$).

Implications for practice: A closer look into strategies to increase adherence with care processes targeting critically ill ventilated patients is warranted.

Defense of Dissertation Committee
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