Ventilator-Associated Pneumonia in the Trauma Patient: An Accident Prevented by Thinking Outside the Bundle
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Background and Objectives
Ventilator-associated pneumonia (VAP) is a significant problem in trauma patients increasing mortality and cost of care. While monitoring adherence to VAP prevention strategies reflected 98% compliance, our VAP rate revealed monthly variation (0-34) and a plateau for two consecutive years (8.04). Nurses in the Neuro ICU recognized the need to apply different strategies to impact trauma patients’ outcomes. A team was created for the purpose to decrease VAP in the trauma patients.

Method
A review of the literature revealed the positive impact of team rounding and use of an interdisciplinary tool on VAP rates (Byrnes et al 2009; Chua et al 2010; DuBose et al 2010; Laux et al 2010; Heimes et al 2011). Each discipline was responsible for confirming specific evidenced-based practices that prevent VAP. These strategies were then embedded into a check-off tool to be used during rounding. Initially, interdisciplinary team rounding occurred twice a week. Modifications to the tool occurred frequently to improve communication during rounding. Recognizing the impact that rounding made on ensuring timely interventions, the Neuro ICU began using the tool to round every day on all ventilated patients while maintaining biweekly interdisciplinary rounding with the Trauma Services.

Results
The above tool was used daily during interdisciplinary rounds, which included nursing, dietitian, pharmacist, respiratory therapy, physical therapy and nursing leadership. Our Trauma Team also attended rounds biweekly to participate in the rounding process. Since implementation of intentional VAP rounding and daily use of the interdisciplinary tool, Trauma Services have experienced a zero VAP rate for six consecutive months. Implementing the same process on every ventilated patient, the Neuro ICU has decreased their overall VAP rate from 3.0 to 1.54 over the same period. Vigilance to ensure continued rounding and prompt implementation of interventions continues to be a strategy supported by leadership.

Conclusion

References