On the CUSP: Eliminating Ventilator-Associated Pneumonia
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Problem: Ventilator Associated Pneumonia (VAP) is a preventable healthcare associated infection (HAI) that increases length of stay in critical care, morbidity, mortality, and increases the financial burden on the healthcare system.

Evidence: VAP increases length of stay in the ICU from an average of 8.0 to 18.5 days. Median duration of hospitalization increases from 14.0 to 26.5 days. There is an increase in mortality attributed to VAP of 27% and as high as 43% when the pathogen is antibiotic resistant. Total inpatient charges per patient nearly double in the presence of VAP.

Strategy: The CUSP program is “comprehensive unit based safety program” designed to improve clinicians’ communication, awareness of safety and ability to learn from errors, and to help implement teamwork tools. A multi-disciplinary approach to the prevention of VAP utilizing evidence-based practice (EBP) was developed.

Practice Change: Developed and implemented consistent use of a VAP prevention bundle including: HOB >30º, Oral care q4 hours with use of Chlorhexidine q12 hours, sedation vacation and readiness to wean assessments daily, VTE and GI prophylaxis, and early mobilization.

Evaluation: Daily audits are conducted to evaluate and ensure compliance with bundle components.

Results: The ICU experienced 50% decrease in the incidence of VAP from 2009 to 2010 and a complete elimination of VAP in 2011.


Lessons Learned: VAP can be effectively prevented utilizing evidence-based practice with a multi-disciplinary approach.

Bibliography: