Preventing Ventilator Associated Pneumonia

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Preventing Ventilator Associated Pneumonia
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PATIENT CARE ISSUE
• Most common nosocomial (hospital acquired) infection is VAP
• Primary concern: Increases morbidity and mortality rates
• 8-28% of critical care patients develop VAP
• VAP increases length of hospital stay
• Adds $20,000-40,000 to cost of hospital stay
• Insurance companies will not cover cost

EVIDENCE-BASED PRACTICE QUESTION
Question: What is the best method to reduce the occurrence of VAP?
Purpose: Examine research concerning methods to prevent VAP
Interventions: VAP/ventilator bundle
 Compared: Oral care with chlorhexidine, HOB elevation >30⁰, PUD prophylaxis, Sedation vacations, subglottic suctioning, silver coated ET tubes
Outcomes: Interventions significantly reduced VAP rates

REGISTERED NURSE INTERVIEW
• Interviewed a Registered Nurse on the trauma unit at Miami Valley Hospital
• Official policy is vigorous oral care with VAP mouth care kit every 2 hours
• Brush teeth every 8 hours in addition to VAP mouth care kit
• Do not use a VAP bundle

METHODS
• We searched CINAHL and PubMed
• Search was limited to the last five years and full text articles
• PubMed: Search keywords “ventilator associated pneumonia,” “prevention of VAP”
• CINAHL: Search keywords “Prevention of VAP,” “Ventilator Associated Pneumonia”, “Research on prevention of ventilator associated pneumonia”

RESULTS
• Found 181 articles from CINAHL, 10 relevant (6% relevant)
• Found 64 articles from PubMed, 4 relevant (6% relevant)
• After inclusion/exclusion criteria, chose 5 from CINAHL and 4 from PubMed

SYNTHESIS OF EVIDENCE
• Strong relationship between decreased VAP rates and increased compliance with VAP bundles ¹, ²
• Combined use of interventions more strongly related to lower VAP rates than individual elements alone ³, ⁴
• Silver-coated endotracheal tubes statistically significant in reducing VAP rates ⁵
• ISD of secretions statistically significant reduces the incidence of VAP ⁶
• Nearly all interventions effective in reducing VAP, though not in every study
• Oral care with chlorhexidine and VAP bundles individually most effective
• Combined interventions considered most effective
• Studies’ results varied, more testing needed

EVIDENCE-BASED PRACTICE RECOMMENDATIONS
• Due to its effectiveness we recommend frequent oral care with chlorhexidine ¹, ², ³, ⁴
• Further research needs to be conducted due to limited information and inconsistencies in VAP bundles

REFERENCES

LIMITATIONS
• Not all VAP bundles/protocols are the same, therefore their results are not easily compared.