11-2012

Preventing Ventilator Associated Pneumonia

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**Recommended Citation**

Warner, Ashley and Dennis, Becky, "Preventing Ventilator Associated Pneumonia" (2012). *Pharmacy and Nursing Student Research and Evidence-Based Medicine Poster Session*. Paper 27.  
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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

## 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

## 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

## 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

## 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”

## Limitations
- Not all VAP bundles/protocols are the same, therefore their results are not easily compared.

## References