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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 >30°, 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”

LIMITATIONS

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

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

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