An EBP Project to Reduce VAP: Continuous Subglottic Suctioning
Lisa Baker, RN, BSN, CCRN
Susan Smith (Presenter)
Baylor University Medical Center at Dallas
Susan Smith

Problem:
Ventilator-associated pneumonia (VAP) found in the intensive care unit setting is a common hospital acquired infection that causes increases in hospitalization stay, costs, morbidity, and mortality. Standard endotracheal tubes allow subglottic secretions to pool above the tube’s cuff, which can then cause pneumonia when the secretions contaminate the lower respiratory tract.

The IOWA model was used to frame the research question: does the use of continuous subglottic suctioning endotracheal tube (CSS ETT) reduce the incidence of VAP in mechanically ventilated adults compared to the standard endotracheal tube?

Evidence:
After attending an evidence based practice fellowship at Texas Christian University, literature including systematic reviews, meta-analyses, and retrospective chart reviews in CINAHL, Pubmed, and Cochrane databases were reviewed and critiqued. The evidence and clinical data recommends CSS ETT may be advantageous in decreasing the incidence of VAP, particularly late-onset VAP in patients expected to remain intubated at lease forty-eight hours.

Strategy:
Unit handouts and a power point presentation were given to staff nurses and respiratory therapists showing the rationale and use of CSS ETT with supporting literature and QI data to reinforce the importance of utilizing the CSS ETT to aid in unit’s reduction of VAP rates.

Practice Change:
Daily vent checklist audits are performed jointly between respiratory and nursing staff on each patient on the unit to confirm CSS ETT are being utilized on ventilated patients. There is also a weekly multidisciplinary team that meets weekly to discuss vent mortality and prevention.

Evaluation:
24 bed MICU implemented the Hi-Lo CSS ETT around February 2009 on our intubated patients. QI data for VAP rates was gathered from July 2007 to January 2013.

Results:
The results showed our unit had a little over a year and a half with no VAPs as well as continued lower VAP rates since the utilization of the Hi-Lo CSS ETT. Our unit has been able to sustain these results over time as well.
**Recommendations:**
Ongoing efforts emphasize continued shared responsibility between respiratory therapy and nursing staff in making sure CSS ETT are being utilized to aid in sustained VAP reduction.

**Lessons Learned:**
Evidence based practice research combined with a multidisciplinary team approach has resulted in sustained VAP reduction and better patient outcomes on our unit.

**Bibliography:**


