Prevention of Ventilator Associated Pneumonia  
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**Problem:** VAP is an airway infection that develops within 48 hours of intubation. It is the leading cause of death among hospital-acquired infections and has a mortality rate of 46%. VAP is a costly complication, increasing cost/case by ~$40,000. VAP prolongs ventilatory support requirements and ICU length of stay 4 to 9 days. Our facility had 66 incidences of VAP in 2006.

**Evidence:** Evidence used to address the problem was gathered from the CDC guidelines to determine the diagnosis of VAP. Data was gathered by infection control coordinators who were non-ICU members, via a 100%, retrospective chart review to determine VAP rates. Best practices to prevent VAP were reviewed for consideration in plan.

**Strategy:** Using a 3 point approach, a review of current evidence-based practice literature was used to gather information on how to decrease VAP rate, that lead to research of current products used on ventilated patients, and diagnostic reliability.

**Practice Change:** The Institute for Healthcare Improvement (IHI) VAP bundle was initiated. Interventions included: elevating the head of the bed to 30-45 degrees, daily sedation wake-up and assessment for extubation, peptic ulcer disease prophylaxis, deep vein thrombosis prophylaxis, oral hygiene and subglottic suctioning.

**Evaluation:** Active surveillance for VAP is based on criteria from the NNIS/National Healthcare Safety Network. Data on VAP bundle compliance was collected by infection control personnel.

**Results:** VAP rates at beginning of this project exceeded the NNIS median. One year after implementation of the VAP Bundle, rates decreased 92% within the MICCU and 38% in the SICU with a total of 35 cases in 2007 (P < 0.05 between 2006 and 2007) with an estimated cost avoidance of $1.2 million.

**Recommendations:** Implement the IHI VAP Bundle to decrease rates.
Bibliography


