Problem
A variety of practices for normal saline (NS) instillation prior to suctioning mechanically ventilated patients were observed in a neuro-intensive care unit. Standards or policies and procedures were not available to guide practice decisions for NS use.

Evidence
Traditional practices for routine NS instillation prior to suctioning can create patient safety threats and cause adverse outcomes. Identification of factors for consideration prior to NS instillation can assist with decision-making to assure best outcomes.

Strategy
A workgroup of nurses conducted a review of scientific literature and developed practice recommendations for NS use when suctioning.

Practice Change
CINAHL, PubMed, and Nursing Reference Center databases were searched using identified keywords. Retrieved articles were divided among group members to be critiqued. Evidence summary tables were developed and findings were discussed/synthesized.

Evaluation
Evidence disclosed that NS instillation does not thin or loosen secretions. Instillation may contribute to ventilator associated pneumonia by dislodging bacteria into the lower airway. NS use can stimulate cough reflex but may lead to increased intracranial pressure and decreased cerebral perfusion. Patients >60 years experienced dyspnea for up to 10 minutes when NS is used. Alternatives to NS instillation included: monitoring hydration status, ensuring airway heat and humidity, and using mucolytic agents/nebulizer treatments.

Results
NS instillation for the purpose of thinning, mobilizing, or removing dried secretions has little or no value. NS instillation prior to suctioning can cause dyspnea and pain/discomfort and effect patients’ vital signs.

Recommendations
Weigh the physiological benefits of making patients cough with the psychological disadvantages of causing anxiety and pain. Clinical guidelines/practice standards will be developed. Educational offerings will define factors for consideration prior to instilling NS during endotracheal suctioning.

Lessons Learned
Healthcare professionals have responsibility to implement current best practices in clinical settings. Practice changes are not always easily accomplished even when evidence is available. Evidence summary tables assisted with development of a strong case to convince practitioners to abandon routine use of NS.
Bibliography


