



THE YVONNE L. MUNN CENTER FOR NURSING RESEARCH

# NURSING RESEARCH EXPO COMMITTEE POSTER ABSTRACT SUBMISSION

## *Evidence-Based Practice*

**Title:** In orally intubated patients, does taping versus using commercial tube holders minimize skin breakdown?

**Investigator(s):**

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To describe your research and findings please use the headings below with a **Maximum of 300 words total.**

**Background/ Significance:**

Endotracheal intubation is frequently used for patients who are cared for in neuroscience intensive care units. Often intubation of these patients can be prolonged. Patients' skin integrity can be compromised by the device used to secure the endotracheal tubes (ETT). Trauma due to adhesives, fungal infections, excoriation, and pressure ulcers may relate to the ETT holder. ETT holders used in our unit include cloth tape and commercial tube holders, selection of which depends on provider preference and patient condition.

**Purpose of Study:**

To determine best practice of securing ETTs with tape or commercial tube holder in order to decrease skin breakdown for neuroscience patients who receive mechanical ventilation via oral intubation.

**Methods:**

A comprehensive literature search was conducted and limited to peer reviewed English language studies from 1992-2014. Sample size, evidence level, quality and limitations were considered prior to synthesizing the articles to evaluate fit, feasibility and appropriateness of potential recommendations.

**Results:**

Seven articles were retrieved that met criteria. Subjects were adults, and in one case an adult mannequin, sample size ranged from 30-1522. Most studies were level II evidence (quasi-experimental design) and good quality. In a comparison between tube holders and tape, three articles demonstrated tube holders resulted in less skin breakdown, one study showed tape exerted less applied forces resulting in less skin breakdown, and three articles showed no difference between the two.

**Conclusions:**

There is a paucity of strong evidence related to this topic. Based on our review, there is limited evidence to support a change of practice regarding ETT securement.

**Implications for Nursing Practice and/or Future Research:**

More research is needed before recommending a nursing practice change. Future studies should evaluate the effect of variables, such as prolonged duration of oral intubation, frequency of changing tape or tube holders, and skin preparation prior to placement, on skin integrity.