



An Alternative Approach to Prevent Lip Pressure Ulcers in the Intubated Patient

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Background

The new requirements for reporting nosocomial pressure ulcers have redefined the way we approach securing oral endotracheal tubes (ET tubes). One of the risks of endotracheal intubation is the development of skin ulcers resulting from taping the ET tube. This injury has broad implications for the patient and the healthcare institution, particularly if the wound requires surgical repair, becomes infected, or increases the patient's length of stay in the hospital.

Methods

After we became aware of the number of lip pressure ulcers we observed in our ICU population, we designed an action plan. We initiated Critical Care rounds to audit and educate ICU staff. We conducted an evaluation of commercial ET tube fasteners. We selected and introduced a commercial securement device in March 2009, for use with the majority of our intubated patients. Unlike securing the ET tube with tape, the selected ET tube fastener* allows the Respiratory Care Practitioner (RCP) to change the position of the ET tube every four hours, further reducing the risk of breakdown.

* Anchor Fast Oral Endotracheal Tube Fastener



Traditional Methods of Securing ET Tubes

- Cloth tape
- Twill tie
- Commercial tube fasteners



Key Improvement Steps

- Development of Pressure Ulcer Committee
- ICU staff assessing daily for potential lip pressure ulcers
- Re-educating Respiratory Therapy (RT) staff about securing tubes with cloth tape
- Evaluating and implementing a new oral endotracheal tube fastener*
- The Skin and Wound Assessment Team (SWAT) continues to monitor skin breakdown on a weekly basis for all ICU patients



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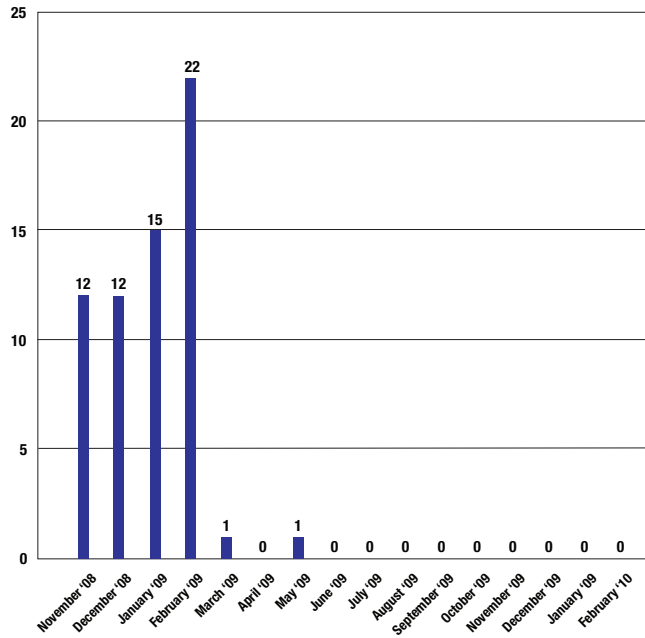


Table 1 Lip breakdown associated with tape (November 2008–February 2009) and after implementation of commercial tube fastener* (March–October 2009)

Results

Before our project, our wound care staff recorded 61 incidents of breakdown, skin tears, and lip pressure ulcers within a four-month period. After we started using a commercial ET tube fastener* in March 2009, our hospital-acquired breakdown and pressure ulcers of the lip declined substantially (see Table 1). We continue to monitor all patients for pressure ulcers on a weekly basis. Also, there was no rise in our ICU ventilator associated pneumonia (VAP) rates or unplanned extubations after implementing the new tube fastener.

Conclusions

Breakdown and lip pressure ulcers associated with ET intubation should be closely monitored and prevented whenever possible. A multifaceted approach was successful in our institution, helping us to reduce nosocomial skin injury and raise awareness of the importance of this aspect of patient care. This information, while specific to the Critical Care community, could be useful to others concerned with reducing lip breakdown and pressure ulcers through development of new, innovative products.



* Anchor Fast Oral Endotracheal Tube Fastener





As presented at
**The Symposium
on Advanced Wound Care**
April 17–20, 2010
Orlando, Florida

Reference List

1. Boulain T. Unplanned extubations in the adult intensive care unit. *Am J Respir Crit Care Med.* 1998; 157:1131-7.
2. Kaplow R, Bookbinder M. A comparison of four endotracheal tube holders. *Heart Lung.* 1994; 23:59-66.
3. Epstein SK, Nevins ML, Chung J. Effect of unplanned extubation on outcome of mechanical ventilation. *Am J Respir Crit Care Med.* 2000; 161:1912-16.
4. H Levy and L Griego. A comparative study of oral endotracheal tube securing methods. *CHEST,* November 1993; vol. 104 no. 5:1537-1540

FINANCIAL ASSISTANCE/DISCLOSURE

Support was provided for poster development by Hollister Incorporated, Critical Care.



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Hollister Limited
95 Mary Street
Aurora, Ontario L4G 1G3
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